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 Godowski, Paul J.
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 Kljavin, Ivar J.
 Napier, Mary A.
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 Roy, Margaret Ann
 Stewart, Timothy A.
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Lys Ile Asp Gln Met Gly Arg Trp Phe Val Ala Gly Gly Ala Ala

80 85 90

Val Gly Leu Gly Ala Leu Cys Tyr Tyr Gly Leu Gly Leu Ser Asn

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Glu Ile Gly Ala Ile Glu Lys Ala Val Ile Trp Pro Gln Tyr Val

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Lys Asp Arg Ile His Ser Thr Tyr Met Tyr Leu Ala Gly Ser Ile

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Gly Leu Thr Ala Leu Ser Ala Ile Ala Ile Ser Arg Thr Pro Val

	140	145	150
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Leu Met Asn Phe Met Met Arg Gly Ser Trp Val Thr Ile Gly Val

155 160 165

Thr Phe Ala Ala Met Val Gly Ala Gly Met Leu Val Arg Ser Ile

170 175 180

Pro Tyr Asp Gln Ser Pro Gly Pro Lys His Leu Ala Trp Leu Leu

185 190 195

His Ser Gly Val Met Gly Ala Val Val Ala Pro Leu Thr Ile Leu

200 205 210

Gly Gly Pro Leu Leu Ile Arg Ala Ala Trp Tyr Thr Ala Gly Ile

215 220 225

Val Gly Gly Leu Ser Thr Val Ala Met Cys Ala Pro Ser Glu Lys

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Phe Leu Asn Met Gly Ala Pro Leu Gly Val Gly Leu Gly Leu Val

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Phe Val Ser Ser Leu Gly Ser Met Phe Leu Pro Pro Thr Thr Val

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Ala Gly Ala Thr Leu Tyr Ser Val Ala Met Tyr Gly Gly Leu Val

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 35 40 45
 Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe 60
 50 55 60
 Tyr Phe Pro Val Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn 75
 65 70 75
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 80 85 90
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn 100
 95 100 105

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<213> Homo sapiens

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Asp	Phe	Val	Glu	Gln	Lys	Cys	Glu	Val	Asn	Cys	Lys	Gly	Gly
				35					40				45
Val	Ile	Thr	Pro	Gly	Ser	Pro	Glu	Pro	Val	Ile	Leu	Val	Ala
				50					55				60
Val	Pro	Leu	Val	Phe	Asp	Asp	Glu	Glu	Glu	Ser	Lys	Leu	Thr
				65					70				75
Thr	Glu	Ile	His	Gln	Glu	Tyr	Lys	Glu	Leu	Val	Glu	Lys	Leu
				80					85				90
Glu	Gly	Tyr	Leu	Lys	Glu	Ile	Gly	Ile	Asn	Glu	Asp	Gln	Phe
				95					100				105
Glu	Ala	Cys	Thr	Ser	Pro	Leu	Ala	Lys	Thr	His	Thr	Ser	Gln
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Ile	Leu	Gln	Pro	Val	Leu	Ala	Ala	Glu	Asp	Phe	Thr	Ile	Phe
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Ala	Met	Met	Val	Gln	Lys	Asn	Ile	Glu	Met	Gln	Leu	Gln	Ala
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Arg	Ile	Ile	Gln	Glu 155	Arg	Asn	Gly	Val	Leu 160	Pro	Asp	Cys	Leu	Thr 165
Asp	Gly	Ser	Asp	Val 170	Val	Ser	Asp	Leu	Glu 175	His	Glu	Glu	Met	Lys 180
Ile	Leu	Arg	Glu	Val 185	Leu	Arg	Lys	Ser	Lys 190	Glu	Glu	Tyr	Asp	Gln 195
Glu	Glu	Glu	Arg	Lys 200	Arg	Lys	Lys	Gln	Leu 205	Ser	Glu	Ala	Lys	Thr 210
Glu	Glu	Pro	Thr	Val 215	His	Ser	Ser	Glu	Ala 220	Ala	Ile	Met	Asn	Asn 225
Ser	Gln	Gly	Asp	Gly 230	Glu	His	Phe	Ala	His 235	Pro	Pro	Ser	Glu	Val 240
Lys	Met	His	Phe	Ala 245	Asn	Gln	Ser	Ile	Glu 250	Pro	Leu	Gly	Arg	Lys 255
Val	Glu	Arg	Ser	Glu 260	Thr	Ser	Ser	Leu	Pro 265	Gln	Lys	Gly	Leu	Lys 270
Ile	Pro	Gly	Leu	Glu 275	His	Ala	Ser	Ile	Glu 280	Gly	Pro	Ile	Ala	Asn 285
Leu	Ser	Val	Leu	Gly 290	Thr	Glu	Glu	Leu	Arg 295	Gln	Arg	Glu	His	Tyr 300
Leu	Lys	Gln	Lys	Arg 305	Asp	Lys	Leu	Met	Ser 310	Met	Arg	Lys	Asp	Met 315
Arg	Thr	Lys	Gln	Ile 320	Gln	Asn	Met	Glu	Gln 325	Lys	Gly	Lys	Pro	Thr 330
Gly	Glu	Val	Glu	Glu 335	Met	Thr	Glu	Lys	Pro 340	Glu	Met	Thr	Ala	Glu 345
Glu	Lys	Gln	Thr	Leu 350	Leu	Lys	Arg	Arg	Leu 355	Leu	Ala	Glu	Lys	Leu 360
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Trp	Ala	Ser	Leu	Leu	Thr	Leu	Phe	Leu	Ser	Ile	Val	Ala	Leu	Thr
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Ala	Gly	Thr	Lys	Thr	Leu	Gln	His	Asn	Leu	Ala	Gly	Arg	Gly	Phe
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His	His	Asp	Ala	Phe	Phe	Ser	Pro	Ser	Asn	Ser	Cys	Leu	Leu	Phe
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Arg	Ser	Glu	Cys	Pro	Arg	Lys	Asp	Asn	Cys	Thr	Ala	Lys	Glu	Trp
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Phe	His	Val	Leu	Met	Ala	Gln	Val	Thr	Thr	Val	Ile	Ile	Thr	Thr
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Val	Ser	Val	Leu	Val	Phe	Asp	Phe	Arg	Pro	Ser	Leu	Glu	Phe	Phe
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Leu	Glu	Ala	Pro	Ser	Val	Leu	Leu	Ser	Ile	Phe	Ile	Tyr	Asn	Ala
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Ser	Lys	Pro	Gln	Val	Pro	Glu	Tyr	Ala	Pro	Arg	Gln	Glu	Arg	Ile
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Arg	Asp	Leu	Ser	Gly	Asn	Leu	Trp	Glu	Arg	Ser	Ser	Gly	Asp	Gly
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 ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 700
 cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 750
 cttta 755

<210> 16
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 16
 ctatacctac tgtagcttct 20

<210> 17
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 17
 tcagagaatt cttocagga 20

<210> 18
 <211> 40
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtctgt agtcattctgt taatatgtctt ctgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

cggacgcgtg ggcggacgcg tggcgggacg cgtggggcgg gcttggctag 50
cgcgcgcgcg ccgtggctaa ggctgctacg aagcgagctt gggaggagca 100
gcggcctgcg gggcagagga gcatcccgto taccaggtcc caagcgcgct 150
ggcccgcggg tcatggccaa aggagaagcg gccgagagcg gctccgcggc 200
gggggtgcta cccaccagca tctcccaaag cactgaacgc ccggcccgag 250
tgaagaaaga accgaaaaag aagaacaac agttgtctgt ttgcaacaag 300
ctttgctatg cacttggggg agcccccctac caggtgacgg gctgtgccct 350
gggtttcttc cttcagatct acctattgga tgtggctcag gtgggcccct 400
tctctgcttc catcatctgt tttgtgggco gagcctggga tgcatcaca 450
gacccctcgt tgggcctctg catcagcaaa tcccctggga cctgcctggg 500
tcgccttatg cctgggatca tcttctccac gccctgggcc gtcattgcct 550
acttctctcat ctggttcgtg ccggaattcc cacacggcca gaactattgg 600
tacctgcttt tctattgcct ctttgaaca atggtcacgt gtttccatgt 650
tccctactcg gctctcacca tgttcacag caaccgagca gactgagcgg 700
gattctgccca ccgcctatcg gatgactgtg gaagtgtctg gcacagtgtc 750
gggcacggcg atccagggac aaatcgtggg ccaagcagac acgccttgtt 800
tccaggactt caatagctct acagtgcctt cacaagtgc caaccatata 850
catggcacca cttcacacag ggaaacgcaa aaggcatacc tgctggcagc 900
gggggtcatt gtctgtatct atataatctg tgctgtcatc ctgacctcgg 950
gcgtgcggga gcagagagaa ccctatgaag cccagcagtc tgagccaatc 1000
gcctacttcc ggggcctacg gctggctcat agccacggcc catatcatca 1050
acttattact ggcttctctt tcacctctct ggcttctcat ctgggtgagg 1100
ggaaactttg ctgtttttgc acctacacct tgggcttccg caatgaattc 1150
cagaatctac tctctggccat catgctctcg gccactttaa ccattcccat 1200
ctggcagtggt ttcttgaccc gggttggcaa gaagacagct gtatatgttg 1250

Gly	Arg	Asp	Ser	Ala	Thr	Ala	Tyr	Arg	Met	Thr	Val	Glu	Val	Leu
				110					115					120
Gly	Thr	Val	Leu	Gly	Thr	Ala	Ile	Gln	Gly	Gln	Ile	Val	Gly	Gln
				125					130					135
Ala	Asp	Thr	Pro	Cys	Phe	Gln	Asp	Phe	Asn	Ser	Ser	Thr	Val	Ala
				140					145					150
Ser	Gln	Ser	Ala	Asn	His	Thr	His	Gly	Thr	Thr	Ser	His	Arg	Glu
				155					160					165
Thr	Gln	Lys	Ala	Tyr	Leu	Leu	Ala	Ala	Gly	Val	Ile	Val	Cys	Ile
				170					175					180
Tyr	Ile	Ile	Cys	Ala	Val	Ile	Leu	Ile	Leu	Gly	Val	Arg	Glu	Gln
				185					190					195
Arg	Glu	Pro	Tyr	Glu	Ala	Gln	Gln	Ser	Glu	Pro	Ile	Ala	Tyr	Phe
				200					205					210
Arg	Gly	Leu	Arg	Leu	Val	Met	Ser	His	Gly	Pro	Tyr	Ile	Lys	Leu
				215					220					225
Ile	Thr	Gly	Phe	Leu	Phe	Thr	Ser	Leu	Ala	Phe	Met	Leu	Val	Glu
				230					235					240
Gly	Asn	Phe	Val	Leu	Phe	Cys	Thr	Tyr	Thr	Leu	Gly	Phe	Arg	Asn
				245					250					255
Glu	Phe	Gln	Asn	Leu	Leu	Leu	Ala	Ile	Met	Leu	Ser	Ala	Thr	Leu
				260					265					270
Thr	Ile	Pro	Ile	Trp	Gln	Trp	Phe	Leu	Thr	Arg	Phe	Gly	Lys	Lys
				275					280					285
Thr	Ala	Val	Tyr	Val	Gly	Ile	Ser	Ser	Ala	Val	Pro	Phe	Leu	Ile
				290					295					300
Leu	Val	Ala	Leu	Met	Glu	Ser	Asn	Leu	Ile	Ile	Thr	Tyr	Ala	Val
				305					310					315
Ala	Val	Ala	Ala	Gly	Ile	Ser	Val	Ala	Ala	Ala	Phe	Leu	Leu	Pro
				320					325					330
Trp	Ser	Met	Leu	Pro	Asp	Val	Ile	Asp	Asp	Phe	His	Leu	Lys	Gln
				335					340					345
Pro	His	Phe	His	Gly	Thr	Glu	Pro	Ile	Phe	Phe	Ser	Phe	Tyr	Val
				350					355					360
Phe	Phe	Thr	Lys	Phe	Ala	Ser	Gly	Val	Ser	Leu	Gly	Ile	Ser	Thr
				365					370					375
Leu	Ser	Leu	Asp	Phe	Ala	Gly	Tyr	Gln	Thr	Arg	Gly	Cys	Ser	Gln
				380					385					390
Pro	Glu	Arg	Val	Lys	Phe	Thr	Leu	Asn	Met	Leu	Val	Thr	Met	Ala
				395					400					405
Pro	Ile	Val	Leu	Ile	Leu	Leu	Gly	Leu	Leu	Leu	Phe	Lys	Met	Tyr
				410					415					420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln
 425 430
 Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp
 440 445 450
 Ser Thr Glu Leu Ala Ser Ile Leu
 455

<210> 21
 <211> 571
 <212> DNA
 <213> Homo sapiens

<400> 21
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 tatataatct gtgctgtcat cctgatccgt ggcgtgcggg agcagagaga 100
 accctatgaa gccagcagct ctgagccaat cgcctacttc cggggcctac 150
 ggctggctcat gagccacggc ccatacatca aacttattac tggcttcctc 200
 ttcacctcct tggctttcat gctggtggag gggaactttg tcttgttttg 250
 caccacaccc ttgggcttcc gcaatgaatt ccagaatcta ctccgtgccca 300
 tcatgctctc ggccaactta accattccca tctggcagtg gttcttgacc 350
 cgggtttggca agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
 atttctcatc ttggtggccc toatggagag taacctcatc attacatatg 450
 cggtagctgt ggcagctggc atcagtgtgg cagctgcctt cttactaccc 500
 tgggtccatgc tgctgatgt cattgacgac ttccatctga agcagcccca 550
 ctcccatgga accgagccca t 571

<210> 22
 <211> 1173
 <212> DNA
 <213> Homo sapiens

<400> 22
 ggggcttcgg ccgcagcggc cagcgctagt cggctcggta aggatttaca 50
 aaaggtgcag gtatgagcag gtctgaagac taacattttg tgaagttgta 100
 aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150
 cttccttcag cccttgaat ttggacatct gctgctttca tattttcata 200
 cactactgca gtaacactcc accatataga ccggccttta ccttatatca 250
 gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300
 aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350
 agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaacaagg 400
 ctggccttgt acttgaata ctgagttgtt taggacttcc tattgtggca 450

Met Phe Val Gln Thr Ile Leu Ser Tyr Gln Met Gln Pro Lys Ile
140 145 150
His Gly Lys Gln Val Phe Trp Ile Arg Leu Leu Leu Val Ile Trp
155 160 165
Cys Gly Val Ser Ala Leu Ser Met Leu Thr Cys Ser Ser Val Leu
170 175 180
His Ser Gly Asn Phe Gly Thr Asp Leu Glu Gln Lys Leu His Trp
185 190 195
Asn Pro Glu Asp Lys Gly Tyr Val Leu His Met Ile Thr Thr Ala
200 205 210
Ala Glu Trp Ser Met Ser Phe Ser Phe Phe Gly Phe Phe Leu Thr
215 220 225
Tyr Ile Arg Asp Phe Gln Lys Ile Ser Leu Arg Val Glu Ala Asn
230 235 240
Leu His Gly Leu Thr Leu Tyr Asp Thr Ala Pro Cys Pro Ile Asn
245 250 255
Asn Glu Arg Thr Arg Leu Leu Ser Arg Asp Ile
260 265

<210> 24
<211> 485
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 14, 484
<223> unknown base

<400> 24
cggacgcttg ggcnegcgcca gcggccagcg ctagtgggtc tggttaagtc 50
ctgatgccga gttccgtctc tcgggtcttt tctgggtccc aggcmaaagcg 100
gagcggagat cctcaaacgg cctagtgttt cgcgcttcgg gagaaaaatca 150
gcggtctaata taattcctct ggtttgttga agcagttacc aagaatcttc 200
aaccctttcc cacaaaagct aattgagtag acgttcctgt tgagtacacg 250
ttcctgttga ttacaaaag gtgcaggtat gagcaggtct gaagactaac 300
atattgtgaa gttgtaaaac agaaaacctg ttagaaatgt ggtggtttca 350
gcaaggcctc agtttccttc cttcagccct tgtaatttgg acatctgctg 400
ctttcatatt ttacataatt actgcagtaa cactccacca tatagacccc 450
gctttacctt atatcagtga cactggtaca gtanc 485

<210> 25
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 25
 acctgtaga aatgtggtg tttcagcaag gcctcagttt 40

 <210> 26
 <211> 46
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 26
 ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

 <210> 27
 <211> 1399
 <212> DNA
 <213> Homo sapiens

 <400> 27
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 ctgccccgcg ggccggggtg cggagccgac atgcgccgc tctctggcct 100
 cttcttggtc ttgcggggtt gcaccttcgc cttgtacttg ctgtcgagcg 150
 gactgcgccg cgggcgagaga ctgggctcca ccgaggaggc tggaggcagg 200
 tgcgtgtggt tccctccga cctggcagag ctgcgggagc tctctgaggt 250
 ccttcagagag taccggaagg agcaccagcg ctacgtgttc ctgctcttct 300
 gcggcgcccta cctctacaaa cagggtcttg ccatccccgg ctccagcttc 350
 ctgaatgttt tagctgtgco cttgtttggg ccatggctgg ggctctctgt 400
 gtgctgtgtg ttgacctcgg tgggtgccac atgctgtctac ctgctctcca 450
 gtatttttgg caaacagttg gtggtgtcct actttcctga taaagtgccc 500
 ctgctgcaga gaaaggttga ggagaacaga aacagcttgt tttttttctt 550
 attgttttgg agacttttcc ccatgacacc aaactgttcc ttgaacctct 600
 cggccccaat tctgaacatt cccatcgtgc agttcttctt ctcagttctt 650
 atcggtttga tcccatataa tttcatctgt gtgcagacag ggtccatctc 700
 gtcaacccta acotctctgg atgctctttt ctctgggac actgtcttta 750
 agctgttggc cattgccatg gtggcattaa ttcctggaac cctcattaaa 800
 aaatttagtc agaaacatct gcaattgaat gaaacaagta ctgctaatac 850
 tatacacagt agaaaagaca catgatctgg attttctgtt tgccacatcc 900
 ctggactcag ttgcttattt gtgtaatgga tgtggtcttc taaagccctc 950
 cattgttttt gattgccttc tatagggtat gtggacactg tgcacaaatg 1000

tgcagtgtct tttcagaaag gacactctgc tcttgaaggt gtattacatc 1050
 aggttttcaa accagccctg gtgtagcaga cactgcaaca gatgcctctc 1100
 agaaaatgct gtttgtggcc gggcgcggtg gctcacgcct gtaatccagc 1150
 cactttggga ggccgaggcc ggtgattcac aaggtcagga gttcaagacc 1200
 agcctggcca agatggtgaa atcctgtctc taataaaaat acaaaaatta 1250
 gccaggcgtag gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300
 gcaggagaat tgcttgaacc aaggtggcag aggttgagcgt aagccaagat 1350
 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28
 <211> 264
 <212> PRT
 <213> Homo sapiens

<400> 28
 Met Arg Pro Leu Leu Gly Leu Leu Leu Val Phe Ala Gly Cys Thr
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 Phe Ala Leu Tyr Leu Leu Ser Thr Arg Leu Pro Arg Gly Arg Arg
 20 25 30
 Leu Gly Ser Thr Glu Glu Ala Gly Gly Arg Ser Leu Trp Phe Pro
 35 40 45
 Ser Asp Leu Ala Glu Leu Arg Glu Leu Ser Glu Val Leu Arg Glu
 50 55 60
 Tyr Arg Lys Glu His Gln Ala Tyr Val Phe Leu Leu Phe Cys Gly
 65 70 75
 Ala Tyr Leu Tyr Lys Gln Gly Phe Ala Ile Pro Gly Ser Ser Phe
 80 85 90
 Leu Asn Val Leu Ala Gly Ala Leu Phe Gly Pro Trp Leu Gly Leu
 95 100 105
 Leu Leu Cys Cys Val Leu Thr Ser Val Gly Ala Thr Cys Cys Tyr
 110 115 120
 Leu Leu Ser Ser Ile Phe Gly Lys Gln Leu Val Val Ser Tyr Phe
 125 130 135
 Pro Asp Lys Val Ala Leu Leu Gln Arg Lys Val Glu Glu Asn Arg
 140 145 150
 Asn Ser Leu Phe Phe Phe Leu Leu Phe Leu Arg Leu Phe Pro Met
 155 160 165
 Thr Pro Asn Trp Phe Leu Asn Leu Ser Ala Pro Ile Leu Asn Ile
 170 175 180
 Pro Ile Val Gln Phe Phe Phe Ser Val Leu Ile Gly Leu Ile Pro
 185 190 195
 Tyr Asn Phe Ile Cys Val Gln Thr Gly Ser Ile Leu Ser Thr Leu
 200 205 210

Thr Ser Leu Asp Ala Leu Phe Ser Trp Asp Thr Val Phe Lys Leu
 215 225
 Leu Ala Ile Ala Met Val Ala Leu Ile Pro Gly Thr Leu Ile Lys
 230 235 240
 Lys Phe Ser Gln Lys His Leu Gln Leu Asn Glu Thr Ser Thr Ala
 245 250 255
 Asn His Ile His Ser Arg Lys Asp Thr
 260

<210> 29
 <211> 1292
 <212> DNA
 <213> Homo sapiens

<400> 29
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 gtcaatcatt ttccagttct cagccgctca gttgtgatca agggacacgt 100
 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
 tgggaagacat g gatcttgct gccaacgaga tcagcattta tgacaaactt 200
 tcagagactg ttgatttggg gagacagacc ggccatcagt gtggcatgctc 250
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300
 ctcaagagacc cccccgcag tatcctctcc ttatagttgt gtataaggtt 350
 ctgcgaacct tgggattaat cttgctcact gcctactttg tgattcaacc 400
 tttcagccca ttagcacctg agccagtgtc ttctggagct cacacctggc 450
 gctcactcat ccatcacatt aggctgatgt ccttgcccat tgccaagaag 500
 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550
 accctttcca gactttgacc cctgggtggac aaacgactgt gacgagaatg 600
 agtcagagcc cattcctgcc aactgcactg gctgtgcccc gaacacacctg 650
 aagggtgatgc tcctggaaga cggcccaagg aaatttgaga ggctccatcc 700
 actggtgatc aagacgggaa agccccgtgt ggaggaagag attcagcatt 750
 ttttgtgcca gtaccctgag gcgacagaag gcttctctga aggggttttc 800
 gccaaagtgtt ggcgtgctt tcctgagcgg tggttcccat ttccattatcc 850
 atggaggaga cctctgaaca gatcacaaat gttacgtgag ctttttctcg 900
 ttttcaactc cctgccattt ccaaaagatg cctctttaa caagtgcctc 950
 tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000
 cctattttatc attggcagcg gtgaggccat gttgcagctc atccctccct 1050
 tccagtgcgg aagacattgt cagtctgtgg ccatgccaat agagccaggg 1100
 gatatcggtc atgtcgacac caccactgg aggtctacg ttatagccag 1150

aggggtccag cctttgttca tctgcatgg aaccgcttcc tcagaactgt 1200
 aggaataga actgtgcaca ggaacagctt ccagagccga aaaccagggt 1250
 gaaaggggaa aaataaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser
 1 5 10 15
 Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met
 20 25 30
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys
 35 40 45
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val
 50 55 60
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala
 65 70 75
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val
 80 85 90
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg
 95 100 105
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys
 110 115 120
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp
 125 130 135
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu
 140 145 150
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys
 155 160 165
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His
 170 175 180
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile
 185 190 195
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser
 200 205 210
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp
 215 220 225
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln
 230 235 240
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro
 245 250 255

Lys	Asp	Ala	Ser	Leu	Asn	Lys	Cys	Ser	Phe	Leu	His	Pro	Glu	Pro
				260					265					270
Val	Val	Gly	Ser	Lys	Met	His	Lys	Met	Pro	Asp	Leu	Phe	Ile	Ile
				275					280					285
Gly	Ser	Gly	Glu	Ala	Met	Leu	Gln	Leu	Ile	Pro	Pro	Phe	Gln	Cys
				290					295					300
Arg	Arg	His	Cys	Gln	Ser	Val	Ala	Met	Pro	Ile	Glu	Pro	Gly	Asp
				305					310					315
Ile	Gly	Tyr	Val	Asp	Thr	Thr	His	Trp	Lys	Val	Tyr	Val	Ile	Ala
				320					325					330
Arg	Gly	Val	Gln	Pro	Leu	Val	Ile	Cys	Asp	Gly	Thr	Ala	Phe	Ser
				335					340					345

Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
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 gcccgagggg cgcgagcccc gcatgaatca ttgtagtcaa tcattttcca 100
 gttctcagcc gttcagttgt gatcaaggga cactgtggtt ccgaactgcc 150
 agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200
 ttgctgcca cagatcagc atttatgaca aactttcaga gactgttgat 250
 ttggtgagac agacccggcca tcagtgtggc atgtcagaga aggcaattga 300
 aaaatttatc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttgga 400
 ttaattctgc tcaactgccta ctttgtgatt caacctttca gccatttagc 450
 aactgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
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 ccaactgatga ggcagggtcc ccaactgcag ctgcagcagc tgcagcagct 100
 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgctagaccg 150
 tgcctatgag ccgctggggc tgcaagtggg actgccctcc ctgccacca 200
 ccaatggcag cccacacctt tttgaagact tccaggcttt ttgtgccaca 250

ccogaatggc gccacttcat cgacaaacag gtacagccaa coactgtccca 300
 gttcgaaatg gacacgtatg ctaagagcca cgaccttatg tcagggtttct 350
 ggaatgcctg ctatgacatg cttatgagca gtggggcagcg gcgccagtgg 400
 gagcgogccc agagtcgctg ggccttcacg gagctggtgc tggaaacctgc 450
 gcagaggcgg gcgcgccttg agggggctacg ctacacggca gtgctgaagc 500
 agcaggcaac gcagcactcc atggccctgc tgactggggg ggcgctgtgg 550
 cgccagctcg ccagcccatg tggggccttg gcgctgaggg acactcccat 600
 cccccgctgg aaactgtcca gcgcgagac atattcacgc atgcgtctga 650
 agctggtgcc caaccatcac ttgacccctc acctggaagc cagcgctctc 700
 cgagacaatc tgggtgaggt tcccttgaca cccaccgagg aggcctcact 750
 gcctctggca gtgaccaaag aggccaaagt gagcacccca ccgagttgc 800
 tgaggaggga ccagctcgcc gaggacgagc tggctgagct ggagacccc 850
 atggaggcag cagaactgga tgagcagcgt gagaagctgg tgctgtcggc 900
 cgagtgcag ctggtgacgg tagtgccgt ggtccaggg ctgctggagg 950
 tcaccacaca gaatgtatac ttctacgatg gcagcactga gcgcgtggaa 1000
 accgaggagg gcacgggcta tgatttcg cgccactgg ccagctgcg 1050
 tgaggtccac ctgcggcggt tcaacctgcg ccgttcagca cttgagctct 1100
 tctttatcga tcaggccaac tacttctcta acttcccatg caaggtgggc 1150
 acgacccag tctcatctcc tagccagact ccgagacccc agcctggccc 1200
 catccacccc catacccagg tacggaacca ggtgtactcg tggctctcgc 1250
 gcctaaggcc cccctctcaa ggtaccta ggcagcgctc cccccaggag 1300
 atgctgcgtg cctcaggcct taccagaaa tgggtacagc gtgagatata 1350
 caacttcgag tacttgatgc aactcaacac cattgcgggg cggacctaca 1400
 atgacctgtc toagtacct gtgttcccc gggctcctga ggactacgtg 1450
 tcccaacccc tggacctcag caaccagcc gtcttcgggg acctgtctaa 1500
 gcccatcggt gtggtgaacc ccaagcatgc ccagctcgtg agggagaagt 1550
 atgaaagctt tgaggaccca gcagggacca ttgacaagtt ccaactatgg 1600
 acccaactact ccaatgcagc aggcgtgatg cactacctca tccgcgtgga 1650
 gcccttcacc tccctgcacg tccagctgca aagtggccgc tttgactgct 1700
 ccgacgggca gttccactcg gtggcggcag cctggcaggc acgctggagg 1750
 agccctgcg atgtgaagga gctcatcccg gaattcttct actttcttga 1800
 cttctcgagg aaccagaacg gttttgacct gggctgtctc cagctgacca 1850

gttaccacct cagggattgg cgggcggaag tcccgccctt cgccggctga 3500
 ggggcgcgcc tgagggccag cactggcgto t 3531

<210> 33
 <211> 1003
 <212> PRT
 <213> Homo sapiens

<400> 33
 Met Ser Gln Phe Glu Met Asp Thr Tyr Ala Lys Ser His Asp Leu
 1 5 10 15
 Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser
 20 25 30
 Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe
 35 40 45
 Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu
 50 55 60
 Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His
 65 70 75
 Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala
 80 85 90
 Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg
 95 100 105
 Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys
 110 115 120
 Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala
 125 130 135
 Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu
 140 145 150
 Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr
 155 160 165
 Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu
 170 175 180
 Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln
 185 190 195
 Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val
 200 205 210
 Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val
 215 220 225
 Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly
 230 235 240
 Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val
 245 250 255
 His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe
 260 265 270

Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val	275	280	285
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln	290	295	300
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	305	310	315
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	320	325	330
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	335	340	345
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	350	355	360
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	365	370	375
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	380	385	390
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	395	400	405
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	410	415	420
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	425	430	435
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	440	445	450
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	455	460	465
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	470	475	480
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	485	490	495
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly	500	505	510
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp	515	520	525
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln	530	535	540
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu	545	550	555
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro	560	565	570
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu	575	580	585

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys	590	595	600
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln	605	610	615
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala	620	625	630
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe	635	640	645
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val	650	655	660
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp	665	670	675
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met	680	685	690
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro	695	700	705
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly	710	715	720
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val	725	730	735
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His	740	745	750
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr	755	760	765
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu	770	775	780
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	785	790	795
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	800	805	810
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	815	820	825
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu	830	835	840
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	845	850	855
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	860	865	870
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	875	880	885
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	890	895	900

Ala	Leu	Thr	Val	Thr	Glu	Asp	Phe	Val	Leu	Leu	Gly	Thr	Ala	Gln
				905					910					915
Cys	Ala	Leu	His	Ile	Leu	Gln	Leu	Asn	Thr	Leu	Leu	Pro	Ala	Ala
				920					925					930
Pro	Pro	Leu	Pro	Met	Lys	Val	Ala	Ile	Arg	Ser	Val	Ala	Val	Thr
				935					940					945
Lys	Glu	Arg	Ser	His	Val	Leu	Val	Gly	Leu	Glu	Asp	Gly	Lys	Leu
				950					955					960
Ile	Val	Val	Val	Ala	Gly	Gln	Pro	Ser	Glu	Val	Arg	Ser	Ser	Gln
				965					970					975
Phe	Ala	Arg	Lys	Leu	Trp	Arg	Ser	Ser	Arg	Arg	Ile	Ser	Gln	Val
				980					985					990
Ser	Ser	Gly	Glu	Thr	Glu	Tyr	Asn	Pro	Thr	Glu	Ala	Arg		
				995					1000					

<210> 34
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 34
 tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35
 <211> 1395
 <212> DNA
 <213> Homo sapiens

<400> 35
 cggacgcgtg ggccggacgcg tgggggctgt gagaaagtc caataaatac 50
 atcatgaac cccacggccc accttgtgaa ctctctgtgc ccagggtcta 100
 tgtgcgtctt ccagggtctac tcatccaaag gctaatcca acgttctgtc 150
 ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga ccttaactgt 200
 ggtactggcc ctggggccaat gcgtcctcgc tggagccttt gcctcctctc 250
 actgggcctt ccacaagccc caggacatcc ctaccttccc cttaatctct 300
 gccttcaccc gcacactccg ttaccacact gggtcattgg catttggagc 350
 cctcatcctg acccttgtgc agatagcccc ggtcatcttg gagtatattg 400
 accacaagct cagaggagtg cagaaccctg tagcccgctg catcatgtgc 450
 tgtttcaagt gctgcctctg gtgtctggaa aaatttatoa agttcctaaa 500
 cgcgaatgca tacatcatga tcgccatcta cgggaagaat ttctgtgtct 550
 cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtggtc 600
 gctctggaca aagtcacaga cctgctgctg ttctttggga agctgctggt 650

Lys Leu Arg Gly Val Gln Asn Pro Val Ala Arg Cys Ile Met Cys
140 145 150

Cys Phe Lys Cys Cys Leu Trp Cys Leu Glu Lys Phe Ile Lys Phe
155 160 165

Leu Asn Arg Asn Ala Tyr Ile Met Ile Ala Ile Tyr Gly Lys Asn
170 175 180

Phe Cys Val Ser Ala Lys Asn Ala Phe Met Leu Leu Met Arg Asn
185 190 195

Ile Val Arg Val Val Val Leu Asp Lys Val Thr Asp Leu Leu Leu
200 205 210

Phe Phe Gly Lys Leu Leu Val Val Gly Gly Val Gly Val Leu Ser
215 220 225

Phe Phe Phe Phe Ser Gly Arg Ile Pro Gly Leu Gly Lys Asp Phe
230 235 240

Lys Ser Pro His Leu Asn Tyr Tyr Trp Leu Pro Ile Met Thr Ser
245 250 255

Ile Leu Gly Ala Tyr Val Ile Ala Ser Gly Phe Phe Ser Val Phe
260 265 270

Gly Met Cys Val Asp Thr Leu Phe Leu Cys Phe Leu Glu Asp Leu
275 280 285

Glu Arg Asn Asn Gly Ser Leu Asp Arg Pro Tyr Tyr Met Ser Lys
290 295 300

Ser Leu Leu Lys Ile Leu Gly Lys Lys Asn Glu Ala Pro Pro Asp
305 310 315

Asn Lys Lys Arg Lys Lys
320

<210> 37
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 37
tcgtgccag gggctgatgt gc 22

<210> 38
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 38
gtctttacc agccccggga tgcg 24

<210> 39
<211> 50

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 39
ggcctaattcc aacgtttctgt cttcaatctg caaatctatg gggtcctggg 50

<210> 40
<211> 1365
<212> DNA
<213> Homo sapiens

<400> 40
gagtcttgac cgccgccggg ctcttggtac ctcagcgcg ggcagcgcg 50
tccggccgcc gtggctatgt tcgtgtccga tttccgcaa gagttctacg 100
aggtggtcca gagccagagg gtccttctct tcgtggcctc ggacgttgat 150
gctctgtgtg cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200
gcaatatacg ctggttccag tttctgggtg gcaagaactt gaaactgcat 250
ttcttgagca taaagaacag ttctattatt ttatttctcat aaactgtgga 300
gctaattgag acctattgga tattcttcaa cctgatgaag acactatatt 350
ctttgtgtgt gactcccata ggccagtc aa tgctgtaaat gtatacaacg 400
ataccagat caaattactc attaaacaag atgatgacct tgaagtctcc 450
gcctatgaag acatcttcag ggatgaagag gaggtgaag agcattcagg 500
aaatgacagt gatgggtcag agccttctga gaagcgaca cggttagaag 550
aggagatagt ggagcaaacc atgcggagga ggcagcgcg agagtgggag 600
gcccggagaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650
gacatcgta gccatggtga tgtttgagct ggcttgatg ctgtccaagg 700
acctgaatga catgctgtgg tgggccatcg ttggactaac agaccagtgg 750
gtgcaagaca agatcaactc aatgaaatac gtgactgatg ttggtgtcct 800
gcagcgccac gtttcccgcc acaaccaccg gaacgaggat gaggagaaca 850
cactctcgt ggactgcaca cggatctcct ttgagtga cctccgctg 900
gtgctctacc agcactggtc cctccatgac agcctgtgca acaccagcta 950
taccgcagcc aggttcaagc tgtggtctgt gcatggacag aagcggtccc 1000
aggagtctct tgcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050
ttocaggcca tggacatctc cttgaaggag aatttgcggg aaatgattga 1100
agagtctgca aataaatttg ggatgaagga catgcgctg cagactttca 1150
gcattcattt tgggttcaag cacaagtttc tggccagcga cgtggtcttt 1200

gccaccatgt ctttcatgga gagccccgag aaggatggct cagggacaga 1250
 tcacttcacg caggctctgg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccaaagaagc agctgcgagc caccagcag 1350
 accattgccg gctgc 1365

<210> 41
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 41
 Met Phe Val Ser Asp Phe Arg Lys Glu Phe Tyr Glu Val Val Gln 15
 1 5 10
 Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu 30
 20 25
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val 45
 35 40
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr 60
 50 55
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile 75
 65 70
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp 90
 80 85
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn 105
 95 100
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys 120
 110 115
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg 135
 125 130
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly 150
 140 145
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val 165
 155 160
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg 180
 170 175
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly 195
 185 190
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser 210
 200 205
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr 225
 215 220
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr 240
 230 235
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

245	250	255
Asn Glu Asp Glu Glu Asn Thr Leu Ser	Val Asp Cys Thr Arg Ile	
260	265	270
Ser Phe Glu Tyr Asp Leu Arg Leu Val	Leu Tyr Gln His Trp Ser	
275	280	285
Leu His Asp Ser Leu Cys Asn Thr Ser	Tyr Thr Ala Ala Arg Phe	
290	295	300
Lys Leu Trp Ser Ser Val His Gly Gln Lys	Arg Leu Gln Glu Phe Leu	
305	310	315
Ala Asp Met Gly Leu Pro Leu Lys Gln	Val Lys Gln Lys Phe Gln	
320	325	330
Ala Met Asp Ile Ser Leu Lys Glu Asn	Leu Arg Glu Met Ile Glu	
335	340	345
Glu Ser Ala Asn Lys Phe Gly Met Lys	Asp Met Arg Val Gln Thr	
350	355	360
Phe Ser Ile His Phe Gly Phe Lys His	Lys Phe Leu Ala Ser Asp	
365	370	375
Val Val Phe Ala Thr Met Ser Leu Met	Glu Ser Pro Glu Lys Asp	
380	385	390
Gly Ser Gly Thr Asp His Phe Ile Gln	Ala Leu Asp Ser Leu Ser	
395	400	405
Arg Ser Asn Leu Asp Lys Leu Tyr His	Gly Leu Glu Leu Ala Lys	
410	415	420
Lys Gln Leu Arg Ala Thr Gln Gln Thr	Ile Ala Ser Cys Leu Cys	
425	430	435
Thr Asn Leu Val Ile Ser Gln Gly Pro	Phe Leu Tyr Cys Ser Leu	
440	445	450
Met Glu Gly Thr Pro Asp Val Met Leu	Phe Ser Arg Pro Ala Ser	
455	460	465
Leu Ser Leu Leu Ser Lys His Leu Leu	Lys Ser Phe Val Cys Ser	
470	475	480
Thr Lys Asn Arg Arg Cys Lys Leu Leu	Pro Leu Val Met Ala Ala	
485	490	495
Pro Leu Ser Met Glu His Gly Thr Val	Thr Val Val Gly Ile Pro	
500	505	510
Pro Glu Thr Asp Ser Ser Asp Arg Lys	Asn Phe Phe Gly Arg Ala	
515	520	525
Phe Glu Lys Ala Ala Glu Ser Thr Ser	Ser Arg Met Leu His Asn	
530	535	540
His Phe Asp Leu Ser Val Ile Glu Leu	Lys Ala Glu Asp Arg Ser	
545	550	555
Lys Phe Leu Asp Ala Leu Ile Ser Leu	Leu Ser	

<210> 42
 <211> 380
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 44, 118, 172, 183
 <223> unknown base

<400> 42
 gtacctcagc gcgagcgcca ggcgtcoggc cgcggtggct atgntogtgt 50
 ccgatttccg caaagagttc tacgaggtgg tccagagcca gagggctcctt 100
 ctcttcgtgg cctcggangt ggatgctctg tgtgctgtga agatccttca 150
 ggccctgttc cagtgtgacc angtgcaata tangctgggtt ccagtttctg 200
 ggtggcaaga acttgaaact gcattttctg agcataaaga acagtttcat 250
 tattttattc tcataaaactg tggagctaata gtagacctat tggatattct 300
 tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350
 tcaatgttgt caatgtatac aacgataccc 380

<210> 43
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 43
 ttccgcaaag agttctacga ggtgg 25

<210> 44
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 44
 attgacaaca ttgactggcc tatggg 26

<210> 45
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 45
 gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgtga 50

<210> 46

<211> 3089
 <212> DNA
 <213> Homo sapiens

<400> 46
 caggaacccct ctcttttgggt ctggattggg acccctttcc agtaccattt 50
 ttcttagtga accacgaagg gacgatacca gaaaacaccc tcaacccaaa 100
 ggaaatagac tacagcccca attggctgac ttggctata gaaaaaagaa 150
 aggaacgaaa agagacagtt ttttttgaa agctaagtct tccctttatc 200
 gagtcaagaa acccccccct cttagctat ttacagcttt taacaattga 250
 gtaaagtacg ctccggtcac catggtgaca gccgccctgg gtcccgtctg 300
 ggcagcgtc ctgctctttc tcctgatgtg tgagatccgt atgggtggagc 350
 tcacctttga cagagctgtg gccagcggct gccacgggtg ctgtgactct 400
 gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggccg 450
 ccccaacgcc ctgctgaga tcagacccta cattaatatc accatcctga 500
 aggggtgacaa aggggaccca ggcccaatgg gcctgccagg gtacatgggc 550
 agggagggtc cccaagggga gcctggccct cagggcagca agggtgacaa 600
 gggggagatg ggcagccccg gcgcccgtg ccagaagcgc ttcttgcct 650
 tctcagtggt cgcgaagacg gccctgcaca gcggcgagga cttccagacg 700
 ctgctcttcg aaagggtctt tgtgaacct gatgggtgct ttgacatggc 750
 gaccggccag ttgtgtgctc cctgcgtgg catctacttc ttcagcctca 800
 atgtgcacag ctggaattac aaggagacgt acgtgcacat tatgcataac 850
 cagaaagagg ctgtcatcct gtacgcgcag ccagcgcagc gcagcatcat 900
 gcagagccag agtgtgatgc tggacctggc ctacggggac cgcgtctggg 950
 tgccgctctt caagcgccag cgcgagaacg ccatctacag caacgacttc 1000
 gacacctaca tcaccttcag cggccacctc atcaaggccg aggacgactg 1050
 agggcctctg ggccaccctc ccggctggag agctcaggtg ctggctccgt 1100
 cccctgcagg gctcagtttg cactgctgtg aagcaggaag gccagggagg 1150
 tccccggga cctggcattc tggggagacc ctgcttctat cttggctgcc 1200
 atcatccctc ccagcctatt tctgctctc tcttctctct tggacctatt 1250
 ttaagaagct tgctaacota aatatctag aactttocca gcctcgtagc 1300
 ccagcacttc tcaaacttgg aaatgcatgc gaatcaoccg gggttcgtgt 1350
 taaatgcaga ttctgactca gcaggctga gtgggtccag gattctgtgt 1400
 ttctcatatg ttctgggtg atgctgatgg ggtcagtcta tgaaccacac 1450

tggagcaacc aggttctagc actttctcaa tattctagta ctttctgaac 1500
 attctggaat cctcccccaca ttctagaatt ctcccaacat tttttttctt 1550
 tgagacagag tcttgctctg ttgcccagcg tagagtgcag tgggtgcaatc 1600
 tcagttcact gcaacctctg cctcccggtt tcaagcgatt cttctgcctc 1650
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 tttttgtatt tttagtagag atgggggttc accatattgg ccaggctggg 1750
 cttgaactcc tgacttcagg tgaccacccc gcctcgccct ctcaaaatgc 1800
 tgggattaca ggtgtgagcc accgtgcctg gccaatcca acattcttaa 1850
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 gaggggggtca gacacaggcc ctgcccctgc cctcagtgc tggccagtc 2050
 agcccaggcg gggagagatg tgtacatagg ttttaaagca gaccagagc 2100
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 ccaactgctcc ccaaggctgg tgggacgggg tccgggtggc aggggcagg 2200
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 accccagggg gccttgcca ggtcaagggt tctgtgagga gaggaccag 2300
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 cttgtcagc cctctccacc aaagtcatct gaacttccgt tccccaggg 2500
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 ctggtgctgc ctttacaaac acctgcagga gaagggccac ggaagcccca 2700
 ggccttagag cctccagcag gtctggggag ctagagcaaa ggagggaact 2750
 caggccttcc gtttcttctt ccagggtggg gtggcctggt gttccctag 2800
 ccttccaaac ccagggtgcc tgcccttctc cccagaggga ggcggcctcc 2850
 gccattggt gctcatgcag actctggggc tgaggtgcc cggggggtga 2900
 tctctggtgc tcacagccga gggagccgtg gctccatggc cagatgacgg 2950
 aaacagggtc tgaccaagtg ccagggaagac ctgtgtata aaccacctg 3000
 cctgatcctg ccctgcctg accccgccac gccctgccgt ccagcatgat 3050

taaagaatgc tgtctcctct tggaaaaaaa aaaaaaaaaa 3089

<210> 47
 <211> 259
 <212> PRT
 <213> Homo sapiens
 <220>
 <221> Signal Peptide
 <222> 1-20
 <223> Signal Peptide
 <220>
 <221> N-glycosylation Site
 <222> 72-75
 <223> N-glycosylation Site
 <220>
 <221> Clq Domain Proteins
 <222> 144-178, 78-111, 84-117
 <223> Clq Domain Proteins

<400> 47
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 35 40 45
 Pro Leu Asp Pro Ala His Val Ser Ser Ala Ser Ser Ser Gly Arg
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 Pro His Ala Leu Pro Glu Ile Arg Pro Tyr Ile Asn Ile Thr Ile
 65 70 75
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 Tyr Met Gly Arg Glu Gly Pro Gln Gly Glu Pro Gly Pro Gln Gly
 95 100 105
 Ser Lys Gly Asp Lys Gly Glu Met Gly Ser Pro Gly Ala Pro Cys
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 Gln Lys Arg Phe Phe Ala Phe Ser Val Gly Arg Lys Thr Ala Leu
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 His Ser Gly Glu Asp Phe Gln Thr Leu Leu Phe Glu Arg Val Phe
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 Val Asn Leu Asp Gly Cys Phe Asp Met Ala Thr Gly Gln Phe Ala
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 Ala Pro Leu Arg Gly Ile Tyr Phe Phe Ser Leu Asn Val His Ser
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 Trp Asn Tyr Lys Glu Thr Tyr Val His Ile Met His Asn Gln Lys
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Gln Ser Gln Ser Val Met Leu Asp Leu	Ala Tyr Gly Asp Arg Val				
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Ala Glu Asp Asp					

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<220>
 <223> Synthetic oligonucleotide probe

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<220>
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<400> 49
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ccaacacagc	ccaagtaccc	caggcccgcg	agggcaacct	gccgtcctc	1850

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Phe Thr Gly Leu Tyr Cys Glu Ser Gln Met Gly Gln Gly Thr Arg		
440	445	450
Pro Ser Pro Thr Pro Val Thr Pro Arg Pro Pro Arg Ser Leu Thr		
455	460	465
Leu Gly Ile Glu Pro Val Ser Pro Thr Ser Leu Arg Val Gly Leu		
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485	490	495
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500	505	510
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515	520	525
Arg Pro Asn Ala Thr Tyr Ser Val Cys Val Met Pro Leu Gly Pro		
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Gly Arg Val Pro Glu Gly Glu Glu Ala Cys Gly Glu Ala His Thr		
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Pro Pro Ala Val His Ser Asn His Ala Pro Val Thr Gln Ala Arg		
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Glu Gly Asn Leu Pro Leu Leu Ile Ala Pro Ala Leu Ala Ala Val		
575	580	585
Leu Leu Ala Ala Leu Ala Ala Val Gly Ala Ala Tyr Cys Val Arg		
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Arg Gly Arg Ala Met Ala Ala Ala Ala Gln Asp Lys Gly Gln Val		
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Gly Pro Gly Ala Gly Pro Leu Glu Leu Glu Gly Val Lys Val Pro		
620	625	630
Leu Glu Pro Gly Pro Lys Ala Thr Glu Gly Gly Gly Glu Ala Leu		
635	640	645
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<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

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 <212> DNA
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 <223> Synthetic oligonucleotide probe

<400> 54
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<210> 55
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<220>
 <223> Synthetic oligonucleotide probe

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<210> 56
 <211> 3462
 <212> DNA
 <213> Homo sapiens

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Glu	Thr	Val	Val	Asn	Met	Asn	Leu	Ser	Tyr	Asn	Lys	Leu	Ser	Asp	425	430	435
Ser	Val	Phe	Arg	Cys	Leu	Pro	Lys	Ser	Ile	Gln	Ile	Leu	Asp	Leu	440	445	450
Asn	Asn	Asn	Gln	Ile	Gln	Thr	Val	Pro	Lys	Glu	Thr	Ile	His	Leu	455	460	465
Met	Ala	Leu	Arg	Glu	Leu	Asn	Ile	Ala	Phe	Asn	Phe	Leu	Thr	Asp	470	475	480
Leu	Pro	Gly	Cys	Ser	His	Phe	Ser	Arg	Leu	Ser	Val	Leu	Asn	Ile	485	490	495
Glu	Met	Asn	Phe	Ile	Leu	Ser	Pro	Ser	Leu	Asp	Phe	Val	Gln	Ser	500	505	510
Cys	Gln	Glu	Val	Lys	Thr	Leu	Asn	Ala	Gly	Arg	Asn	Pro	Phe	Arg	515	520	525
Cys	Thr	Cys	Glu	Leu	Lys	Asn	Phe	Ile	Gln	Leu	Glu	Thr	Tyr	Ser	530	535	540
Glu	Val	Met	Met	Val	Gly	Trp	Ser	Asp	Ser	Tyr	Thr	Cys	Glu	Tyr	545	550	555
Pro	Leu	Asn	Leu	Arg	Gly	Thr	Arg	Leu	Lys	Asp	Val	His	Leu	His	560	565	570
Glu	Leu	Ser	Cys	Asn	Thr	Ala	Leu	Leu	Ile	Val	Thr	Ile	Val	Val	575	580	585
Ile	Met	Leu	Val	Leu	Gly	Leu	Ala	Val	Ala	Phe	Cys	Cys	Leu	His	590	595	600
Phe	Asp	Leu	Pro	Trp	Tyr	Leu	Arg	Met	Leu	Gly	Gln	Cys	Thr	Gln	605	610	615
Thr	Trp	His	Arg	Val	Arg	Lys	Thr	Thr	Gln	Glu	Gln	Leu	Lys	Arg	620	625	630
Asn	Val	Arg	Phe	His	Ala	Phe	Ile	Ser	Tyr	Ser	Glu	His	Asp	Ser	635	640	645
Leu	Trp	Val	Lys	Asn	Glu	Leu	Ile	Pro	Asn	Leu	Glu	Lys	Glu	Asp	650	655	660
Gly	Ser	Ile	Leu	Ile	Cys	Leu	Tyr	Glu	Ser	Tyr	Phe	Asp	Pro	Gly	665	670	675
Lys	Ser	Ile	Ser	Glu	Asn	Ile	Val	Ser	Phe	Ile	Glu	Lys	Ser	Tyr	680	685	690
Lys	Ser	Ile	Phe	Val	Leu	Ser	Pro	Asn	Phe	Val	Gln	Asn	Glu	Trp	695	700	705
Cys	His	Tyr	Glu	Phe	Tyr	Phe	Ala	His	His	Asn	Leu	Phe	His	Glu	710	715	720

Asn Ser Asp His Ile Ile Leu Ile Leu Leu Glu Pro Ile Pro Phe
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 Tyr Cys Ile Pro Thr Arg Tyr His Lys Leu Lys Ala Leu Leu Glu
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 Lys Lys Ala Tyr Leu Glu Trp Pro Lys Asp Arg Arg Lys Cys Gly
 755 760 765
 Leu Phe Trp Ala Asn Leu Arg Ala Ala Ile Asn Val Asn Val Leu
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<220>
 <223> Synthetic oligonucleotide probe

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<210> 61
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 <212> DNA
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<210> 62
 <211> 756
 <212> PRT
 <213> Homo sapiens

<400> 62
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 Tyr Tyr Ala Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro
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 Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys
 80 85 90
 Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Pro Gly Lys His Ser
 95 100 105
 Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn
 110 115 120
 Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser
 125 130 135
 Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln
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 Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr
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 Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile

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Glu	Val	Asp	Ala	Arg 200	Arg	Leu	Thr	Arg	Phe 205	Thr	Gly	Val	Ile	Thr 210	
Gln	Gly	Arg	Asn Ser 215	Leu	Trp	Leu	Ser	Asp 220	Trp	Val	Thr	Ser	Ser	Thr 225	
Lys	Val	Met	Val	Ser 230	Asn	Asp	Ser	His	Thr 235	Trp	Val	Thr	Val	Lys 240	
Asn	Gly	Ser	Gly	Asp 245	Met	Ile	Phe	Glu	Gly 250	Asn	Ser	Glu	Lys	Glu 255	
Ile	Pro	Val	Leu	Asn 260	Glu	Leu	Pro	Val	Pro 265	Met	Val	Ala	Arg	Tyr 270	
Ile	Arg	Ile	Asn	Pro 275	Gln	Ser	Trp	Phe	Asp 280	Asn	Gly	Ser	Ile	Cys 285	
Met	Arg	Met	Glu	Ile 290	Leu	Gly	Cys	Pro	Leu 295	Pro	Asp	Pro	Asn	Asn 300	
Tyr	Tyr	His	Arg	Arg 305	Asn	Glu	Met	Thr	Thr 310	Thr	Asp	Asp	Leu	Asp 315	
Phe	Lys	His	His	Asn 320	Tyr	Lys	Glu	Met	Arg 325	Gln	Leu	Met	Lys	Val 330	
Val	Asn	Glu	Met	Cys 335	Pro	Asn	Ile	Thr	Arg 340	Ile	Tyr	Asn	Ile	Gly 345	
Lys	Ser	His	Gln	Gly 350	Leu	Lys	Leu	Tyr	Ala 355	Val	Glu	Ile	Ser	Asp 360	
His	Pro	Gly	Glu	His 365	Glu	Val	Gly	Glu	Pro 370	Glu	Phe	His	Tyr	Ile 375	
Ala	Gly	Ala	His	Gly 380	Asn	Glu	Val	Leu	Gly 385	Arg	Glu	Leu	Leu	Leu 390	
Leu	Leu	Val	Gln	Phe 395	Val	Cys	Gln	Glu	Tyr 400	Leu	Ala	Arg	Asn	Ala 405	
Arg	Ile	Val	His	Leu 410	Val	Glu	Glu	Thr	Arg 415	Ile	His	Val	Leu	Pro 420	
Ser	Leu	Asn	Pro	Asp 425	Gly	Tyr	Glu	Lys	Ala 430	Tyr	Glu	Gly	Gly	Ser 435	
Glu	Leu	Gly	Gly	Trp 440	Ser	Leu	Gly	Arg	Trp 445	Thr	His	Asp	Gly	Ile 450	
Asp	Ile	Asn	Asn	Asn 455	Phe	Pro	Asp	Leu	Asn 460	Thr	Leu	Leu	Trp	Glu 465	
Ala	Glu	Asp	Arg	Gln 470	Asn	Val	Pro	Arg	Lys 475	Val	Pro	Asn	His	Tyr 480	
Ile	Ala	Ile	Pro	Glu 485	Trp	Phe	Leu	Ser	Glu 490	Asn	Ala	Thr	Val	Ala 495	
Ala	Glu	Thr	Arg	Ala	Val	Ile	Ala	Trp	Met	Glu	Lys	Ile	Pro	Phe	

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Val Leu Gly Gly	Asn Leu Gln Gly Gly	Glu Leu Val Val	Ala Tyr		
	515		520		525
Pro Tyr Asp Leu	Val Arg Ser Pro Trp	Lys Thr Gln Glu His	Thr		
	530		535		540
Pro Thr Pro Asp	Asp His Val Phe Arg	Trp Leu Ala Tyr	Ser Tyr		
	545		550		555
Ala Ser Thr His	Arg Leu Met Thr Asp	Ala Arg Arg Arg	Val Cys		
	560		565		570
His Thr Glu Asp	Phe Gln Lys Glu Glu	Gly Thr Val Asn	Gly Ala		
	575		580		585
Ser Trp His Thr	Val Ala Gly Ser Leu	Asn Asp Phe Ser Tyr	Leu		
	590		595		600
His Thr Asn Cys	Phe Glu Leu Ser Ile	Tyr Val Gly Cys	Asp Lys		
	605		610		615
Tyr Pro His Glu	Ser Gln Leu Pro Glu	Glu Trp Glu Asn	Asn Arg		
	620		625		630
Glu Ser Leu Ile	Val Phe Met Glu Gln	Val His Arg Gly	Ile Lys		
	635		640		645
Gly Leu Val Arg	Asp Ser His Gly Lys	Gly Ile Pro Asn	Ala Ile		
	650		655		660
Ile Ser Val Glu	Gly Ile Asn His Asp	Ile Arg Thr Ala	Asn Asp		
	665		670		675
Gly Asp Tyr Trp	Arg Leu Leu Asn Pro	Gly Glu Tyr Val	Val Thr		
	680		685		690
Ala Lys Ala Glu	Gly Phe Thr Ala Ser	Thr Lys Asn Cys	Met Val		
	695		700		705
Gly Tyr Asp Met	Gly Ala Thr Arg Cys	Asp Phe Thr Leu	Ser Lys		
	710		715		720
Thr Asn Met Ala	Arg Ile Arg Glu Ile	Met Glu Lys Phe	Gly Lys		
	725		730		735
Gln Pro Val Ser	Leu Pro Ala Arg Arg	Leu Lys Leu Arg	Gly Arg		
	740		745		750
Lys Arg Arg Gln	Arg Gly				
	755				

<210> 63

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 63

gtttctcaatg agctaccgt cccc 24

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 64
cgcgatgtag tggaactcgg gctc 24

<210> 65
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66
<211> 2854
<212> DNA
<213> Homo sapiens

<400> 66
ctaagaggac aagatgaggc cggcctctc atttctccta gcccttctgt 50
tcttctctgg ccaagctgca ggggatttgg gggatgtggg acotccaatt 100
cccagccccg gcttcaagtc tttccaggt gtgactcca gctccagctt 150
cagctccagc tccaggtcgg gctccagctc cagccgcagc ttaggcagcg 200
gaggttctgt gtcccagttg ttttccaatt tcaccggctc cgtggatgac 250
cgtgggacct gccagtgtc tgtttccctg ccagacacca cctttccctg 300
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tatgaaaga aactgtttaa cctaactgtc cgaattgaca tcatggagaa 450
ggataccatt tcttacactg aactggactt cgagctgac aaggtagaag 500
tgaaggagat ggaaaaactg gtcatacagc tgaaggagag ttttggtgga 550
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aaaataaatg attaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850
aaaa 2854

<210> 67
<211> 510
<212> PRT
<213> Homo sapiens

<400> 67
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Gly Gln Ala Ala Gly Asp Leu Gly Asp Val Gly Pro Pro Ile Pro
20 25 30
Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser
35 40 45
Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu
50 55 60
Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly
65 70 75
Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro
80 85 90
Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr
95 100 105
Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val
110 115 120
Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu
125 130 135
Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser
140 145 150
Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu
155 160 165
Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser
170 175 180
Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr
185 190 195
Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu
200 205 210

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

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cctgtcgctcc accctcctcc cactccaggg agctgtggtc atgtgtgtgt 100
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cttatctata tgggtgcttg ggtagggtt actctcccca gcattccaaac 200
aaaggnatgt attggngngc gccattgaat acagatggga gactgttggg 250
gtattataga ctgtacaacc cactggatga ttgtctattg tatataaatg 300
ctcgagagtt gcggatcacc tatggccaag gtagtggtag agcagtttac 350
aacaacaaca tgtactgcaa catgtacaac accgggnata ttgccagagt 400
taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atgtgtgtgt ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctaccttggc cataggtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72
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tggggctgtg ctccatggcg agctggatac catgtttgtg tggaaagtgc 150
cogtgtttgc tatgcgatg ctgtcctagt ggaacaact ccactgtaac 200
tagattgac tatgcacttt tcttgcttgt tggagtagt gtatgtttgtg 250
taatgttgat accaggaatg gaagaacaac tgaataagat tcttggattt 300
tgtgagaatg agaaagggtg tgtcccttgt aacatttttg ttggctataa 350
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ctttactaat gatcaaagtg aagagtagca gtgatcctag agctgcagtg 450
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cctctgcggt ggtgcttctg taatgtctat actgccaaa atccaagaat 850
cacaaccaag atctgggttg ttacagtctt cagtaattac agtctacaca 900
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caccgagctg tagataatga aagggatggt gtcacttaca gttattcctt 1250
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 attctctgct ctatagttgt gaaatgaaga gtaaaacaa atttgtttga 1750
 ctattttaaa attatattag accttaagct gttttagcaa gcattaaagc 1800
 aaatgtatgg ctgocctttg aaatatttga tgtgttgctt gccaggatac 1850
 tgcaagaac atggtttatt ttaaaattta taaacaagtc acttaaatgc 1900
 cagttgtctg aaaaatctta taaggtttta cccttgatac ggaatttaca 1950
 caggtaggga gtgttttagtg gacaatagtg taggttatgg atggagggtg 2000
 cggtactaaa ttgaataacg agtaataaat ctacttggg tagagatggc 2050
 ctttgccaac aaagtgaact gttttggttg ttttaaaact atgaagtatg 2100
 ggttcagtg aaatgttttg aactctgaag gatttagaca aggttttgaa 2150
 aaggataatc atgggttaga aggaagtgtt ttgaaagtc ctttgaaagt 2200
 tagttttggg cccagcacgg tagctcacc ttgtaatcc cagcactttg 2250
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 gtggtccagc actgagaggc tagtgaagat tgctgagccc agagccaaag 2400
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<210> 73
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73
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 20 25 30
 Ser Gly Asn Asn Ser Thr Val Thr Arg Leu Ile Tyr Ala Leu Phe
 35 40 45
 Leu Leu Val Gly Val Cys Val Ala Cys Val Met Leu Ile Pro Gly
 50 55 60
 Met Glu Glu Gln Leu Asn Lys Ile Pro Gly Phe Cys Glu Asn Glu
 65 70 75
 Lys Gly Val Val Pro Cys Asn Ile Leu Val Gly Tyr Lys Ala Val
 80 85 90
 Tyr Arg Leu Cys Phe Gly Leu Ala Met Phe Tyr Leu Leu Leu Ser
 95 100 105
 Leu Leu Met Ile Lys Val Lys Ser Ser Ser Asp Pro Arg Ala Ala
 110 115 120
 Val His Asn Gly Phe Trp Phe Phe Lys Phe Ala Ala Ala Ile Ala
 125 130 135
 Ile Ile Ile Gly Ala Phe Phe Ile Pro Glu Gly Thr Phe Thr Thr
 140 145 150
 Val Trp Phe Tyr Val Gly Met Ala Gly Ala Phe Cys Phe Ile Leu
 155 160 165
 Ile Gln Leu Val Leu Leu Ile Asp Phe Ala His Ser Trp Asn Glu
 170 175 180
 Ser Trp Val Glu Lys Met Glu Glu Gly Asn Ser Arg Cys Trp Tyr
 185 190 195
 Ala Ala Leu Leu Ser Ala Thr Ala Leu Asn Tyr Leu Leu Ser Leu
 200 205 210
 Val Ala Ile Val Leu Phe Phe Val Tyr Tyr Thr His Pro Ala Ser
 215 220 225
 Cys Ser Glu Asn Lys Ala Phe Ile Ser Val Asn Met Leu Leu Cys
 230 235 240
 Val Gly Ala Ser Val Met Ser Ile Leu Pro Lys Ile Gln Glu Ser
 245 250 255
 Gln Pro Arg Ser Gly Leu Leu Gln Ser Ser Val Ile Thr Val Tyr
 260 265 270
 Thr Met Tyr Leu Thr Trp Ser Ala Met Thr Asn Glu Pro Glu Thr
 275 280 285

Asn Cys Asn Pro Ser Leu Leu Ser Ile Ile Gly Tyr Asn Thr Thr	290	295	300
Ser Thr Val Pro Lys Glu Gly Gln Ser Val Gln Trp Trp His Ala	305	310	315
Gln Gly Ile Ile Gly Leu Ile Leu Phe Leu Leu Cys Val Phe Tyr	320	325	330
Ser Ser Ile Arg Thr Ser Asn Asn Ser Gln Val Asn Lys Leu Thr	335	340	345
Leu Thr Ser Asp Glu Ser Thr Leu Ile Glu Asp Gly Gly Ala Arg	350	355	360
Ser Asp Gly Ser Leu Glu Asp Gly Asp Asp Val His Arg Ala Val	365	370	375
Asp Asn Glu Arg Asp Gly Val Thr Tyr Ser Tyr Ser Phe Phe His	380	385	390
Phe Met Leu Phe Leu Ala Ser Leu Tyr Ile Met Met Thr Leu Thr	395	400	405
Asn Trp Ser Arg Tyr Glu Pro Ser Arg Glu Met Lys Ser Gln Trp	410	415	420
Thr Ala Val Trp Val Lys Ile Ser Ser Ser Trp Ile Gly Ile Val	425	430	435
Leu Tyr Val Trp Thr Leu Val Ala Pro Leu Val Leu Thr Asn Arg	440	445	450
Asp Phe Asp			

<210> 74
 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 48, 163
 <223> unknown base

<400> 74
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 ataccatgtt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtcc 150
 tagtggaaac aantccactg taactagatt gatctatgca cttttcttgc 200
 ttgttgagat atgtgtagct tgtgtaatgt tgataccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaag gtgttgtccc 300
 ttgtaacatt ttggttggtc ataaagctgt atatcgtttg tgctttgtgt 350
 tggctatgtt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

096957 *T. H. J.*

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<220>
<221> unsure
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
<223> unknown base
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<210> 76
<211> 473
<212> DNA
<213> Homo sapiens
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<220>
<221> unsure
<222> 48
<223> unknown base
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76

<210> 77
 <211> 666
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 21, 111
 <223> unknown base

<400> 77
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 actttttcct tgcttgttgg agtatgtgta gctttgtgta atgtttgttc 100
 caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150
 gaaagggtgt gtccccttgt aacatTTTTT gttggctata aagctgtata 200
 tcgtttgtgc tttggttgg ctatgttcta tcttcttcto tctttactaa 250
 tgatcaaatg gaagagtagc agtgatccta gagctgcagt gcacaatgga 300
 ttttggttct ttaaatttgc tgcagcaatt gcaattatta ttggggcatt 350
 cttcattcca gaaggaaactt ttacaactgt gtggttttat gtaggcatgg 400
 cagggtgcctt ttgtttcatc ctcatacaac tagtcttact tattgatttt 450
 gcacattcat ggaatgaatc gtgggttgaa aaatggaag aagggaactc 500
 gagatgttgg tatgcagcct tgttatcagc tacagctctg aattatctgc 550
 tgtctttagt tgctatcgtc ctgttctttg tctactacac tcatccagcc 600
 agttgttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650
 tgggtgcttct gtaatg 666

<210> 78
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 78
 atgtttgtgt ggaagtgccc cg 22

<210> 79
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 79
 gtcaacatgc tcctctgc 18

<210> 80
 <211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 80
aatccattgt gcactgcagc tctagg 26

<210> 81
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
gagcatgccca ccaactggact gac 23

<210> 82
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 82
gccgatgctg tcctagtggga aacaactcca ctgtaactag attgatctat 50
gcac 54

<210> 83
<211> 3906
<212> DNA
<213> Homo sapiens

<400> 83
ctcgggcgcg cacaggcagc tcggtttgcc ctgcgattga gctgcgggtc 50
gcggcgcgcg ccggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100
cgcgaggctt tcggcaaaag cagtcgagtg tttgcagacc gggcgagtc 150
ctgtgaaagc agataaaaga aaacatttat taacgtgtca ttacgagggg 200
agcgcccgcg cggggctgtc gcactccccg cggaacattt ggctccctcc 250
agctccgaga gaggagaaga agaaagcgga aaagaggcag attcacgtcg 300
tttcacgcca agtggaacctg atcgatggcc ctccctgaatt tatcacgata 350
tttgatttat tagcgatgcc ccoctggtttg tgtgttacgc acacacacgt 400
gcacacaagg ctctggctcg ctccctccc tcgtttccag ctccctggcg 450
aatccacat ctgtttcaac tctccgcga gggcgagcag gagcgagagt 500
gtgtcgaatc tgcgagtga gagggacgag gaaaaagaa caaagccaca 550
gagcaactt gagactccc catccaaaa gaagcaccag atcagcaaaa 600

aaagaagatg ggccccccga gcctcgtgct gtgcttgctg tccgcaactg 650
 tgttctccct gctgggtgga agctcggcct tctgtgcga ccaccgcctg 700
 aaaggcaggt ttcagaggga cgcaggaac atccgcccc aatcatcct 750
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 ttctgtagca caccatgtg ctgccctca cgtctctca tctcactgg 900
 caagtacgtc cacaaccaca acacctacac caacaatgag aactgctcct 950
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 aatagcactg gctaccggac agctttcttc gggaagtatc ttaatgaata 1050
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 gccccacaat attcacgct cttcccaaac gcattcagc acatcacgcc 1350
 gagctacaac tacgcgcccc acccgacaa acactggatc atgcgtaca 1400
 cggggcccat gaagccatc cacatggaat tcaccaacat gctccagcgg 1450
 aagcgcttgc agaccctcat gtcgggtggac gactccatgg agacgattta 1500
 caacatgctg gttgagacgg gcgagctgga caacacgtac atcgtataca 1550
 ccgccgacca cggttaccac atcgccaggt ttggcctggt gaaagggaaa 1600
 tccatgccat atgagtttga catcagggtc ccgttctac tgagggggcc 1650
 caacgtgga gccggctgtc tgaatcccca catcgtcctc aacattgacc 1700
 tggcccccac catcctggac attgcaggcc tggacatacc tgcggtatag 1750
 gacgggaaat ccatectcaa gctgctggac acggagcggc cggtgaaatc 1800
 gtttacttgg aaaaagaaga tgagggtctg gcgggactcc ttcttggttg 1850
 agagaggcaa gctgctacac aagagagaca atgacaaggt ggacgcccag 1900
 gaggagaact ttctgcccc aatccagcgt gtgaaggacc tgtgtcagcg 1950
 tgctgagtac cagacggcgt gtgagcagct gggacagaag tggcagtgtg 2000
 tggaggacgc caccgggaag ctgaagctgc ataagtgcaa gggcccatag 2050
 cggctggggc gcagcagac cctctccaac ctctgcccc agtactacgg 2100
 gcagggcagc gaggcctgca cctgtgacag cggggactac aagctcagcc 2150
 tggccggacg ccggaaaaa ctctcaaga agaagtacaa ggccagctat 2200

tttacatgta atcaacatgg gaacttttag gggaacctaa taagaaatcc 3850
 caattttcag gagtgggtgt gtcaataaac gctctgtggc cagtgtaaaa 3900
 gaaaaa 3906

<210> 84
 <211> 867
 <212> PRT
 <213> Homo sapiens

<400> 84
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 Leu Lys Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn
 35 40 45
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser
 50 55 60
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly
 65 70 75
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro
 80 85 90
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn
 95 100 105
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala
 110 115 120
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly
 125 130 135
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly
 140 145 150
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys
 155 160 165
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys
 170 175 180
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu
 185 190 195
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met
 200 205 210
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro
 215 220 225
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro
 230 235 240
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn
 245 250 255

Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro
				260					265					270
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln
				275					280					285
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met
				290					295					300
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr
				305					310					315
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly
				320					325					330
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val
				335					340					345
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val
				350					355					360
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu
				365					370					375
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu
				380					385					390
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met
				395					400					405
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu
				410					415					420
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe
				425					430					435
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu
				440					445					450
Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val
				455					460					465
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro
				470					475					480
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys
				485					490					495
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp
				500					505					510
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys
				515					520					525
Lys	Tyr	Lys	Ala	Ser	Tyr	Val	Arg	Ser	Arg	Ser	Ile	Arg	Ser	Val
				530					535					540
Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr	His	Val	Gly	Leu	Gly	Asp
				545					550					555
Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg	His	Trp	Pro	Gly	Ala
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<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

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gaagccggct gtctgaatc 19

<210> 86
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 86
ggccagctat ctccgag 18

<210> 87
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 87
aagggcctgc aagagaag 18

<210> 88
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 88
cactgggaca actgtggg 18

<210> 89
<211> 18
<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 89
cagaggcaac gtggagag 18

<210> 90
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 90
aagtattgtc atacagtgtt c 21

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<210> 91
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 91
 tagtacttgg gcacgaggtt ggag 24

<210> 92
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 92
 tcataccaac tgctggtcat tggc 24

<210> 93
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 93
 ctcaagctgc tggacacgga gcggccggtg aatcggttcc acttg 45

<210> 94
 <211> 971
 <212> DNA
 <213> Homo sapiens

<400> 94
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 aaggagttag gagctgctgg gcagagaggg actgtccggc tcccagatgc 100
 tgggctctct ggggagcaca gccctcgtgg gatggatcac aggtgctgct 150
 gtggcggttc tgctgctgct gctgctgctg gccacctgcc tttccacgg 200
 acggcaggac tgtgacgtgg agaggaaccg tacagctgca gggggaaacc 250
 gagtccgccg gggccagcct tggcccttcc ggcggcgggg ccacctggga 300
 atctttcacc atcacctgca tcctggccac gtatctcatg tgccgaatgt 350
 gggcctccac caccaccacc acccccgcga caccctcac cacctccacc 400
 accaccacca cccccaccgc caccatcccc gccacgtctg ctgaggctgc 450
 tgtgccgggt gcctgtggac agcagctgcc cctgccctcc catctgttcc 500
 caggacaagt ggaccccatg tttccatgtg gaaggatgca tctctggggt 550
 gaacgagggg aacaatagac tggggcttgc tccagctgca tttcatggc 600

atgccccagt gtactatggc agcagagaat ggaggaacac tgggtctgca 650
 gtgtgaagg gtttggggag tggagagcaa ggggtgctctt tcggggctgg 700
 acagcccgtc ttgtgacagt gactcccgat gagccccaga aatgacaagc 750
 gtgtcttggc agagccagca cacaagtgga tgtgaagtgc ccgtcttgac 800
 ctctcatca ggctgctgca ggcctctggc gggcagggca ctgggagagg 850
 ccctgagaat gtcccttttg tttggagaag gcagtgtgag gctgcacagt 900
 caattcatcg gtgccttagt ccaagaaaaa aaaaaccact aagaagcttt 950
 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 95
 Met Leu Gly Leu Leu Gly Ser Thr Ala Leu Val Gly Trp Ile Thr
 1 5 10 15
 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr
 20 25 30
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
 35 40 45
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
 50 55 60
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His
 65 70 75
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His
 80 85 90
 His His Pro Arg His Thr Pro His His Leu His His His His His
 95 100 105
 Pro His Arg His His Pro Arg His Ala Arg
 110 115

<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 96
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 tcggacctgc tactactggg cctgattggg ggctgactc tcttactgct 100
 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150
 aagtgagtgc tgggtcacc cccatccgca acgtcactgt ggccataaag 200
 ttccacatgg ggctctatgg tgagactggg cggtctttca ctgagagctg 250
 cagcatctct cccaagctcc gctccactgc tgtctactat gacaaccccc 300

acatggtgcc cctgataag tgccgatgtg ccgtgggcag catcctgagt 350
 gaagtgtagg aatcgccctc cctgagctc atcgacctct accagaaatt 400
 tggtctcaag gtgttctcct tcccggcacc cagccatgtg gtgacagcca 450
 ccttcccta caccaccatt ctgtcatct ggctggctac ccgccgtgc 500
 catctgcct tggacaccta catcaaggag cggaaagtgt gtgcctatcc 550
 tcggctggag atctaccagg aagaccagat ccatttcattg tgcccactgg 600
 cacggcaggg agacttctat gtgcctgaga tgaaggagac agagtggaaa 650
 tggcgggggc ttgtggaggc cattgacacc caggtggatg gcacaggagc 700
 tgacacaatg agtgacacga gttctgtaag cttggaagtgt agccctggca 750
 gccgggagac ttcagctgcc acactgtcac ctggggcgag cagccgtggc 800
 tgggatgacg gtgacacccg cagcgagcac agctacagcg agtcagggtc 850
 cagcggctcc tcttttgagg agctggactt ggagggcgag gggcccttag 900
 gggagtacg gctggaccct gggactgagc ccctggggac taccaagtg 950
 ctctgggagc ccaactgccc tgagaagggc aaggagtaac ccatggcctg 1000
 caccctctcg cagtgcagtt gctgaggaac tgagcagact ctccagcaga 1050
 ctctccagcc ctcttctcc ttcctctggg ggaggagggg ttctgaggg 1100
 acctgacttc cctgtctcca ggctcttgc taagccttct cctcactgcc 1150
 cttaggctc ccagggccag aggagccagg gactatttct tgcaccagcc 1200
 ccagggtcgt ccgccctgt tgtgtctttt ttccagactc acagtggagc 1250
 ttccaggacc cagaataaag ccaatgattt actgttttca cctggaaaaa 1300
 aaaaaaaaaa aa 1312

<210> 97
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 97
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 1 5 10 15
 Leu Leu Leu Leu Thr Leu Leu Ala Phe Ala Gly Tyr Ser Gly Leu
 20 25 30
 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn
 35 40 45
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr
 50 55 60
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg
 65 70 75

Ser	Ile	Ala	Val	Tyr	Tyr	Asp	Asn	Pro	His	Met	Val	Pro	Pro	Asp	
				80					85					90	
Lys	Cys	Arg	Cys	Ala	Val	Gly	Ser	Ile	Leu	Ser	Glu	Gly	Glu	Glu	
				95					100					105	
Ser	Pro	Ser	Pro	Glu	Leu	Ile	Asp	Leu	Tyr	Gln	Lys	Phe	Gly	Phe	
				110					115					120	
Lys	Val	Phe	Ser	Phe	Pro	Ala	Pro	Ser	His	Val	Val	Thr	Ala	Thr	
				125					130					135	
Phe	Pro	Tyr	Thr	Thr	Ile	Leu	Ser	Ile	Trp	Leu	Ala	Thr	Arg	Arg	
				140					145					150	
Val	His	Pro	Ala	Leu	Asp	Thr	Tyr	Ile	Lys	Glu	Arg	Lys	Leu	Cys	
				155					160					165	
Ala	Tyr	Pro	Arg	Leu	Glu	Ile	Tyr	Gln	Glu	Asp	Gln	Ile	His	Phe	
				170					175					180	
Met	Cys	Pro	Leu	Ala	Arg	Gln	Gly	Asp	Phe	Tyr	Val	Pro	Glu	Met	
				185					190					195	
Lys	Glu	Thr	Glu	Trp	Lys	Trp	Arg	Gly	Leu	Val	Glu	Ala	Ile	Asp	
				200					205					210	
Thr	Gln	Val	Asp	Gly	Thr	Gly	Ala	Asp	Thr	Met	Ser	Asp	Thr	Ser	
				215					220					225	
Ser	Val	Ser	Leu	Glu	Val	Ser	Pro	Gly	Ser	Arg	Glu	Thr	Ser	Ala	
				230					235					240	
Ala	Thr	Leu	Ser	Pro	Gly	Ala	Ser	Ser	Arg	Gly	Trp	Asp	Asp	Gly	
				245					250					255	
Asp	Thr	Arg	Ser	Glu	His	Ser	Tyr	Ser	Glu	Ser	Gly	Ala	Ser	Gly	
				260					265					270	
Ser	Ser	Phe	Glu	Glu	Leu	Asp	Leu	Glu	Gly	Glu	Gly	Pro	Leu	Gly	
				275					280					285	
Glu	Ser	Arg	Leu	Asp	Pro	Gly	Thr	Glu	Pro	Leu	Gly	Thr	Thr	Lys	
				290					295					300	
Trp	Leu	Trp	Glu	Pro	Thr	Ala	Pro	Glu	Lys	Gly	Lys	Glu			
				305					310						

<210> 98
 <211> 725
 <212> DNA
 <213> Homo sapiens

<400> 98
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 ccgcgtccat ctgctgtctc tgctgtctgt cagtgcggcg gtgtgccggg 150
 ctgagggtgg gctcgaaacc gaaagtcgcc tccggaccct ccaagtggag 200
 accctggtgg agccccaga accatgtgcc gagcccgctg cttttggaga 250

cacgcttcac atacactaca cgggaagcct ggtagatgga cgtattattg 300
 acacctccct gaccagagac cctctgggta tagaacttgg ccaaaagcag 350
 gtgattccag gtctggagca gagtcttctc gacatgtgtg tgggagagaa 400
 gcgaagggca atcattccct ctcacttggc ctatggaaaa cggggatttc 450
 caccatctgt ccagcggat gcagtgtgtc agtatgacgt ggagctgatt 500
 gcactaatcc gagccaacta ctggctaaag ctggtgaagg gcattttgcc 550
 tctggtaggg atggccatgg tgccagccct cctgggcctc attgggtatc 600
 acctatacag aaaggccaat agaccctaaag tctccaaaaa gaagctcaag 650
 gaagagaaac gaaacaagag caaaaagaaa taataaataa taaattttaa 700
 aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99
 <211> 201
 <212> PRT
 <213> Homo sapiens

<400> 99
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 1 5 10 15
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 20 25 30
 Thr Glu Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu
 35 40 45
 Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu
 50 55 60
 His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp
 65 70 75
 Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys
 80 85 90
 Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Leu Asp Met Cys Val
 95 100 105
 Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly
 110 115 120
 Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln
 125 130 135
 Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu
 140 145 150
 Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val
 155 160 165
 Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala
 170 175 180
 Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu Glu Lys Arg

Asn Lys Ser Lys Lys Lys
200

<210> 100
<211> 705
<212> DNA
<213> Homo sapiens

<400> 100
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ccggtccct gcccgcgcc cagtcacgac cctgcccgc tcaactcc 100
cgctccatct gctgctgctg ctgctgctca gtgcggcggt gtgcccggct 150
gaggctgggc tcgaaacga aagtcgcgtc cggaccctcc aagtgagac 200
cctggtggag ccccccagaac catgtgccga gcccgctgct ttggagaca 250
cgctccatc acactacacg ggaagcttg tagatggacg tattattgac 300
acctccctga ccagagacc tctggtata gaacttgcc aaaagcagg 350
gattccaggc ctggagcaga gtcttctcga catgtgtgtg ggagagaagc 400
gaagggaat cattctctc cacttgccct atggaaaacg gggatttcca 450
ccatctgtcc cagcggatgc agtggtgcag tatgacgtg agctgattgc 500
actaatccga gccaaactact ggctaaagct ggtgaaggc attttgcctc 550
tggtagggat ggccatggtg ccaccctcct gggcctcatt gggatatcac 600
tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650
gagaaacgaa acaagagcaa aaagaataa taaataataa attttaaaaa 700
actta 705

<210> 101
<211> 543
<212> DNA
<213> Homo sapiens

<400> 101
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gaaccatgtg ccgagccgc tgcttttga gacacgcttc acatacacta 100
cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150
acctctggt tatagaactt ggccaaaagc aggtgatcc aggtctggag 200
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggc caatcattcc 250
ttctcacttg gcctatggaa aacggggatt tocaccatct gtcccagcgg 300
atgcagtgtg gcagatgac gtggagctga ttgcactaat ccgagccaac 350
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctctgggcc tcattgggta tcacctatac agaaaggcca 450
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaaacaag 500
 agcaaaaaga aataataaat aataaatattt aaaaaactta aaa 543

<210> 102
 <211> 1316
 <212> DNA
 <213> Homo sapiens

<400> 102
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 aaatcggggg agtgaggcgg gcggcgcggg cgcgacacgg ggctccggaa 100
 ccactgcacg acggggctgg actgacctga aaaaaatgtc tggatttcta 150
 gaggggcttg gatgctcaga atgcattgac tggggggaaa agcgaatac 200
 tattgcttcc attgctgctg gtgtactatt ttttacaggc tggtggtata 250
 tcatagatgc agctgttatt tatcccacca tgaaagattt caaccactca 300
 taccatgcct gtggtgttat agcaaccata gccttcctaa tgattaatgc 350
 agtatogaat ggacaagtcc gaggtgatag ttacagtga ggttgtctgg 400
 gtcaaacagg tgctcgcat tggcttttcg ttggtttcat gttggccttt 450
 ggatctctga ttgcatctat gtggattctt tttggagggt atgttgctaa 500
 agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550
 tcatcttttt tggagggctg gtttttaagt ttggccgcac tgaagactta 600
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 aacttatttc tgagtgtagt ctgagcttaa agttgtgtaa tactaaaatc 750
 acgagaacac ctacaacaac accaaaaatc tattgtggta tgcacttgat 800
 taacttataa aatgttagag gaaactttca catgaataat ttttgtcaaa 850
 ttttatcatg gtataatttg taaaaataaa aagaaattac aaaagaaatt 900
 atggatttgt caatgtaagt atttgtcata tctgagggtcc aaaaccacaa 950
 tgaaagtgtc ctgaagattt aatgtgttta ttcaaatgtg gtctcttctg 1000
 tgtcaaatgt taaatgaaat ataacaattt tttagttttt aaaatatctc 1050
 gtggtcaaaa ttcttcctca ctataattgg tatttacttt taccaaaaat 1100
 tctgtgaaca tgtaatgtaa ctggcttttg agggctctccc aaggggtgag 1150
 tggacgtgtt ggaagagaga agcaccatgg tccagccacc aggtctccctg 1200
 tgtcccttcc atgggaaggt ctcccgctgt gcctctcatt ccaagggcag 1250
 gaagatgtga ctgagccatg acacgtggtt ctggtgggat gcacagtca 1300

tccacatcca ccaactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

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Trp	Gly	Glu	Lys	Arg	Asn	Thr	Ile	Ala	Ser	Ile	Ala	Ala	Gly	Val
			20						25					30
Leu	Phe	Phe	Thr	Gly	Trp	Trp	Ile	Ile	Ile	Asp	Ala	Ala	Val	Ile
				35					40					45
Tyr	Pro	Thr	Met	Lys	Asp	Phe	Asn	His	Ser	Tyr	His	Ala	Cys	Gly
				50					55					60
Val	Ile	Ala	Thr	Ile	Ala	Phe	Leu	Met	Ile	Asn	Ala	Val	Ser	Asn
				65					70					75
Gly	Gln	Val	Arg	Gly	Asp	Ser	Tyr	Ser	Glu	Gly	Cys	Leu	Gly	Gln
				80					85					90
Thr	Gly	Ala	Arg	Ile	Trp	Leu	Phe	Val	Gly	Phe	Met	Leu	Ala	Phe
				95					100					105
Gly	Ser	Leu	Ile	Ala	Ser	Met	Trp	Ile	Leu	Phe	Gly	Gly	Tyr	Val
				110					115					120
Ala	Lys	Glu	Lys	Asp	Ile	Val	Tyr	Pro	Gly	Ile	Ala	Val	Phe	Phe
				125					130					135
Gln	Asn	Ala	Phe	Ile	Phe	Phe	Gly	Gly	Leu	Val	Phe	Lys	Phe	Gly
				140					145					150
Arg	Thr	Glu	Asp	Leu	Trp	Gln								
				155										

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

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tgggtgatta tcatagatgc agctgttatt tatcccacca tgaagattt 250
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ggttgtctgg gtcaaacagg tgctcgatt tggcttttcg ttggtttcat 400

gttggccttt ggaatcttga ttgcatctat gtggattcct tttggagggt 450
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 cagaatgcct tcactctttt tggagggtg gtttttaagt ttggc 545

<210> 105
 <211> 490
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 31, 39, 108, 145, 179, 219, 412, 479
 <223> unknown base

<400> 105
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 tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
 atagcaacca tagccttctt aatgattaat gcagtatcga atggacaagt 250
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 atgtggattc tttttggagg ttatgttgct aaagaaaag acatagtata 400
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<210> 106
 <211> 466
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449
 <223> unknown base

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atttttccag aatgcc 466

<210> 107
<211> 377
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356
<223> unknown base

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tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200
tgcagtatng aatggacaag tccgaggtga tagttacagt gaaggttgtt 250
tgggtcaaac aggtgntngc atttggcttt tngttggtt catgttggcc 300
tttgatctn tgattgcatt tatgtggatt nttttggag gttatgttg 350
taaaagnaaaa gacatagtat accctgt 377

<210> 108
<211> 552
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 12, 25, 65, 130, 437, 537
<223> unknown base

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<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 109
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<210> 110
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 110
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<210> 111
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 111
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<210> 112
<211> 3004
<212> DNA
<213> Homo sapiens

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 aaaa 3004

<210> 113
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 113
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 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Glu Arg Tyr Val	Ser Met Pro Arg Glu	Glu Ala Ala Glu His Ile
425		430 435
Pro Leu Leu Phe	Phe Ala Phe Pro Ser	Ala Lys Asp Pro Thr Trp
440		445 450
Glu Asp Arg Phe	Pro Gly Arg Ser Thr	Met Ile Met Leu Ile Pro
455		460 465
Thr Ala Tyr Glu	Trp Phe Glu Glu Trp	Gln Ala Glu Leu Lys Gly
470		475 480
Lys Arg Gly Ser	Asp Tyr Glu Thr Phe	Lys Asn Ser Phe Val Glu
485		490 495
Ala Ser Met Ser	Val Val Leu Lys Leu	Phe Pro Gln Leu Glu Gly
500		505 510
Lys Val Glu Ser	Val Thr Ala Gly Ser	Pro Leu Thr Asn Gln Phe
515		520 525
Tyr Leu Ala Ala	Pro Arg Gly Ala Cys	Tyr Gly Ala Asp His Asp
530		535 540
Leu Gly Arg Leu	His Pro Cys Val Met	Ala Ser Leu Arg Ala Gln
545		550 555
Ser Pro Ile Pro	Asn Leu Tyr Leu Thr	Gly Gln Asp Ile Phe Thr
560		565 570
Cys Gly Leu Val	Gly Ala Leu Gln Gly	Ala Leu Leu Cys Ser Ser
575		580 585
Ala Ile Leu Lys	Arg Asn Leu Tyr Ser	Asp Leu Lys Asn Leu Asp
590		595 600
Ser Arg Ile Arg	Ala Gln Lys Lys Lys	Asn
605		610

<210> 114
 <211> 1701
 <212> DNA
 <213> Homo sapiens

<400> 114
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<210> 115

<211> 301

<212> PRT

<213> Homo sapiens

<400> 115

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Leu	Ser	Leu	Ala	Ser	Ala	Ser	Ser	Asp	Glu	Glu	Gly	Ser	Gln	Asp
			20						25				30	

Glu Ser Leu Asp	Ser 35	Lys Thr Thr Leu	Thr 40	Ser Asp Glu Ser Val	45
Lys Asp His Thr	Thr 50	Ala Gly Arg Val	Val 55	Ala Gly Gln Ile Phe	60
Leu Asp Ser Glu	Glu 65	Ser Glu Leu Glu	Ser 70	Ser Ile Gln Glu Glu	75
Glu Asp Ser Leu	Lys 80	Ser Gln Glu Gly	Glu 85	Ser Val Thr Glu Asp	90
Ile Ser Phe Leu	Glu 95	Ser Pro Asn Pro	Glu 100	Asn Lys Asp Tyr Glu	105
Glu Pro Lys Lys	Val 110	Arg Lys Pro Ala	Leu 115	Thr Ala Ile Glu Gly	120
Thr Ala His Gly	Glu 125	Pro Cys His Phe	Pro 130	Phe Leu Phe Leu Asp	135
Lys Glu Tyr Asp	Glu 140	Cys Thr Ser Asp	Gly 145	Arg Glu Asp Gly Arg	150
Leu Trp Cys Ala	Thr 155	Thr Tyr Asp Tyr	Lys 160	Ala Asp Glu Lys Trp	165
Gly Phe Cys Glu	Thr 170	Glu Glu Glu Ala	Ala 175	Lys Arg Arg Gln Met	180
Gln Glu Ala Glu	Met 185	Met Tyr Gln Thr	Gly 190	Met Lys Ile Leu Asn	195
Gly Ser Asn Lys	Lys 200	Ser Gln Lys Arg	Glu 205	Ala Tyr Arg Tyr Leu	210
Gln Lys Ala Ala	Ser 215	Met Asn His Thr	Lys 220	Ala Leu Glu Arg Val	225
Ser Tyr Ala Leu	Leu 230	Phe Gly Asp Tyr	Leu 235	Pro Gln Asn Ile Gln	240
Ala Ala Arg Glu	Met 245	Phe Glu Lys Leu	Thr 250	Glu Glu Gly Ser Pro	255
Lys Gly Gln Thr	Ala 260	Leu Gly Phe Leu	Tyr 265	Ala Ser Gly Leu Gly	270
Val Asn Ser Ser	Gln 275	Ala Lys Ala Leu	Val 280	Tyr Tyr Thr Phe Gly	285
Ala Leu Gly Gly	Asn 290	Leu Ile Ala His	Met 295	Val Leu Val Ser Arg	300

Leu

<210> 116
 <211> 584
 <212> DNA
 <213> Homo sapiens
 <400> 116

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<210> 117
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 117
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 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln
 35 40 45
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg
 50 55 60
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu
 65 70 75
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala
 80 85 90
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val
 95 100 105
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly
 110 115 120
 Phe Ser Pro

<210> 118
 <211> 3402
 <212> DNA
 <213> Homo sapiens
 <400> 118

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gaaggaagac tgggttcag ggactgtggt ctctcctggg gccccgggacc 3250
 cgctgtgtct ttcagccatg ctgatgacca caccctgtcc aggccagaca 3300
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 aa 3402

<210> 119
 <211> 504
 <212> PRT
 <213> Homo sapiens

<400> 119
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 Leu Gly Ala Phe Pro Pro Ala Ala Ala Ala Arg Gly Pro Pro Lys
 20 25 30
 Met Ala Asp Lys Val Val Pro Arg Gln Val Ala Arg Leu Gly Arg
 35 40 45
 Thr Val Arg Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Pro Leu
 50 55 60
 Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser
 65 70 75
 Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys Gln Val Glu
 80 85 90
 Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn Gly Phe
 95 100 105
 Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile
 110 115 120
 Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly
 125 130 135
 Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr
 140 145 150
 Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly
 155 160 165
 Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro
 170 175 180
 Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Glu
 185 190 195
 Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
 200 205 210
 Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn
 215 220 225
 Arg Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln
 230 235 240

Arg Thr Arg Ser	Lys Pro Val Leu Thr	Gly Thr His Pro Val Asn
245	250	255
Thr Thr Val Asp	Phe Gly Gly Thr Thr	Ser Phe Gln Cys Lys Val
260	265	270
Arg Ser Asp Val	Lys Pro Val Ile Gln	Trp Leu Lys Arg Val Glu
275	280	285
Tyr Gly Ala Glu	Gly Arg His Asn Ser	Thr Ile Asp Val Gly Gly
290	295	300
Gln Lys Phe Val	Val Leu Pro Thr Gly	Asp Val Trp Ser Arg Pro
305	310	315
Asp Gly Ser Tyr	Leu Asn Lys Leu Leu	Ile Thr Arg Ala Arg Gln
320	325	330
Asp Asp Ala Gly	Met Tyr Ile Cys Leu	Gly Ala Asn Thr Met Gly
335	340	345
Tyr Ser Phe Arg	Ser Ala Phe Leu Thr	Val Leu Pro Asp Pro Lys
350	355	360
Pro Pro Gly Pro	Pro Val Ala Ser Ser	Ser Ser Ala Thr Ser Leu
365	370	375
Pro Trp Pro Val	Val Ile Gly Ile Pro	Ala Gly Ala Val Phe Ile
380	385	390
Leu Gly Thr Leu	Leu Leu Trp Leu Cys	Gln Ala Gln Lys Lys Pro
395	400	405
Cys Thr Pro Ala	Pro Ala Pro Pro Leu	Pro Gly His Arg Pro Pro
410	415	420
Gly Thr Ala Arg	Asp Arg Ser Gly Asp	Lys Asp Leu Pro Ser Leu
425	430	435
Ala Ala Leu Ser	Ala Gly Pro Gly Val	Gly Leu Cys Glu Glu His
440	445	450
Gly Ser Pro Ala	Ala Pro Gln His Leu	Leu Gly Pro Gly Pro Val
455	460	465
Ala Gly Pro Lys	Leu Tyr Pro Lys Leu	Tyr Thr Asp Ile His Thr
470	475	480
His Thr His Thr	His Ser His Thr His	Ser His Val Glu Gly Lys
485	490	495
Val His Gln His	Ile His Tyr Gln Cys	
500		

<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

cgagatgacg ccgagcccc 20

<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcggcaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

tgctgctcct gctgcgcgcg ctgctgctgg gggccttccc gccgg 45

<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

ccagctgag gagccctgct caagacacgg tcactggatc tgagaaactt 50

ccacggggac cgcattccag agtcagtgac tctgtgaagc accacatct 100

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gcctgggtgt tctccttct ggtcctggaa gtcacatctg tgttggggag 200

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accccagcat ctttgccaag cctgccgaca cctgggagag ccctggtgag 300

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gcggctggac gccattcgtc tctactatgg ggaccgtgta tgtgcccgtc 400

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ggagcagcgg cctggccaga actgctctaa ttacaccgta cgttctctct 550

gcccacacag atccctgcgc cgagacacag agcgcatctg gagcccatgg 600

tctccctgga gcaagtgtct agctgcctgt ggtcagactg ggttccagac 650

tcgcacacgc atttgcttgg cagagatggt gtgctgtgac agtgaggcca 700

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 tactctgtat ttcgaaaaa 4420

<210> 124
 <211> 1184
 <212> PRT
 <213> Homo sapiens

<400> 124
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 Arg Arg Val Gln Pro Gly Lys Lys Asn Pro Ser Ile Phe Ala Lys
 35 40 45
 Pro Ala Asp Thr Leu Glu Ser Pro Gly Glu Trp Thr Thr Trp Phe
 50 55 60
 Asn Ile Asp Tyr Pro Gly Gly Lys Gly Asp Tyr Glu Arg Leu Asp
 65 70 75
 Ala Ile Arg Phe Tyr Tyr Gly Asp Arg Val Cys Ala Arg Pro Leu
 80 85 90
 Arg Leu Glu Ala Arg Thr Thr Asp Trp Thr Pro Ala Gly Ser Thr
 95 100 105
 Gly Gln Val Val His Gly Ser Pro Arg Glu Gly Phe Trp Cys Leu
 110 115 120
 Asn Arg Glu Gln Arg Pro Gly Gln Asn Cys Ser Asn Tyr Thr Val
 125 130 135
 Arg Phe Leu Cys Pro Pro Gly Ser Leu Arg Arg Asp Thr Glu Arg
 140 145 150
 Ile Trp Ser Pro Trp Ser Pro Trp Ser Lys Cys Ser Ala Ala Cys
 155 160 165
 Gly Gln Thr Gly Val Gln Thr Arg Thr Arg Ile Cys Leu Ala Glu
 170 175 180
 Met Val Ser Leu Cys Ser Glu Ala Ser Glu Glu Gly Gln His Cys
 185 190 195
 Met Gly Gln Asp Cys Thr Ala Cys Asp Leu Thr Cys Pro Met Gly
 200 205 210

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala
 1160 1165 1170

Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn
 1175 1180

<210> 125

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 125

ctggtgcctc aacagggagc ag 22

<210> 126

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 126

ccattgtgca ggtcagggtca cag 23

<210> 127

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 127

ctggagcaag tgctcagctg cctgtgggtca gactgggggtc 40

<210> 128

<211> 2819

<212> DNA

<213> Homo sapiens

<400> 128

ctgcaagttg ttaacgccta acacacaagt atgttagget tccaccaagg 50

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ttgggatctg ctttgaggtc ccactctcat ttaaaaaaaaa atacagagac 150

ctacctaccc gtacgcatac atacatatgt gtatatatat gtaaacataga 200

caaagatgc agatcataaa gcaagctctg ctttagtttc caagaagatt 250

acaaagaatt tagagatgta tttgtcaaga tccctgtcga ttcatgccct 300

ttgggttacg gtgtcctcag tgatgcagcc ctaccctttg gtttggggac 350

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gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450

<210> 130
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 130
 tcgattatgg acgaacatgg cagc 24

 <210> 131
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 131
 ttctgagatc cctcatcctc 20

 <210> 132
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 132
 aggttcaggg acagcaagtt tggg 24

 <210> 133
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 133
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 <210> 134
 <211> 1493
 <212> DNA
 <213> Homo sapiens

 <400> 134
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 ccgggcgagg tgtcctcatg acttctcttg tggaccatgt ccgtgatctt 150
 ttttgctgc gtggtagcgg taagggatgg actgcccoto tcagcctcta 200
 ctgattttta ccacacccaa gatttttttg aatggaggag acggctcaag 250
 agtttagcct tgcgactggc ccagtatcca ggtcgaggtt ctgcagaagg 300

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 ctatctgctc ctgccagtgt ccagcagcca tggcctttctg cttcctggag 400
 accctgtggt gggaattcac agcttcctat gacactacct gcattggcct 450
 agcctccagg ccatacgttt ttcttgagtt tgacagcacc attcagaaaag 500
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 tattcgtttt caatacttgc tgttcattgtt acacaagctt cttacggttt 1300
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 tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtatagcca 1400
 tttatatcct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450
 aaatctaag tgttatttaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135

<211> 228

<212> PRT

<213> Homo sapiens

<400> 135

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				20					25					30
Leu	Glu	Trp	Arg	Arg	Arg	Leu	Lys	Ser	Leu	Ala	Leu	Arg	Leu	Ala
				35					40					45

Gln	Tyr	Pro	Gly	Arg	Gly	Ser	Ala	Glu	Gly	Cys	Asp	Phe	Ser	Ile	
				50					55					60	
His	Phe	Ser	Ser	Phe	Gly	Asp	Val	Ala	Cys	Met	Ala	Ile	Cys	Ser	
				65					70					75	
Cys	Gln	Cys	Pro	Ala	Ala	Met	Ala	Phe	Cys	Phe	Leu	Glu	Thr	Leu	
				80					85					90	
Trp	Trp	Glu	Phe	Thr	Ala	Ser	Tyr	Asp	Thr	Thr	Cys	Ile	Gly	Leu	
				95					100					105	
Ala	Ser	Arg	Pro	Tyr	Ala	Phe	Leu	Glu	Phe	Asp	Ser	Ile	Ile	Gln	
				110					115					120	
Lys	Val	Lys	Trp	His	Phe	Asn	Tyr	Val	Ser	Ser	Ser	Gln	Met	Glu	
				125					130					135	
Cys	Ser	Leu	Glu	Lys	Ile	Gln	Glu	Glu	Leu	Lys	Leu	Gln	Pro	Pro	
				140					145					150	
Ala	Val	Leu	Thr	Leu	Glu	Asp	Thr	Asp	Val	Ala	Asn	Gly	Val	Met	
				155					160					165	
Asn	Gly	His	Thr	Pro	Met	His	Leu	Glu	Pro	Ala	Pro	Asn	Phe	Arg	
				170					175					180	
Met	Glu	Pro	Val	Thr	Ala	Leu	Gly	Ile	Leu	Ser	Leu	Ile	Leu	Asn	
				185					190					195	
Ile	Met	Cys	Ala	Ala	Leu	Asn	Leu	Ile	Arg	Gly	Val	His	Leu	Ala	
				200					205					210	
Glu	His	Ser	Leu	Gln	Asp	Pro	Arg	Ser	Trp	Phe	Cys	Trp	Leu	Asp	
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Gln	Thr	Ser													

<210> 136
 <211> 239
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 39, 61, 143, 209
 <223> unknown base

<400> 136
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 tcattcagaa agtgaagtgg cattttaact atgtaagttc ctntcagatg 150
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccatg 200
 ggttctcant atggaggaca cagatgtggc aaatgggggt 239

<210> 137
 <211> 2300
 <212> DNA

<213> Homo sapiens

<400> 137

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Glu	Ser	Glu	Gly	Phe	Ala	Gly	Ser	Arg	Lys	Gly	Val	Leu	Gly	Arg	
				140					145					150	
Val	Tyr	Glu	Thr	Val	Val	Met	Leu	Met	Leu	Leu	Thr	Leu	Leu	Val	
				155					160					165	
Leu	Gly	Met	Val	Trp	Val	Ala	Ser	Ala	Ile	Val	Asp	Lys	Asn	Lys	
				170					175					180	
Ala	Asn	Arg	Glu	Ser	Leu	Tyr	Asp	Phe	Trp	Glu	Tyr	Tyr	Leu	Pro	
				185					190					195	
Tyr	Leu	Tyr	Ser	Cys	Ile	Ser	Phe	Leu	Gly	Val	Leu	Leu	Leu	Leu	
				200					205					210	
Val	Cys	Thr	Pro	Leu	Gly	Leu	Ala	Arg	Met	Phe	Ser	Val	Thr	Gly	
				215					220					225	
Lys	Leu	Leu	Val	Lys	Pro	Arg	Leu	Leu	Glu	Asp	Leu	Glu	Glu	Gln	
				230					235					240	
Leu	Tyr	Cys	Ser	Ala	Phe	Glu	Glu	Ala	Ala	Leu	Thr	Arg	Arg	Ile	
				245					250					255	
Cys	Asn	Pro	Thr	Ser	Cys	Trp	Leu	Pro	Leu	Asp	Met	Glu	Leu	Leu	
				260					265					270	
His	Arg	Gln	Val	Leu	Ala	Leu	Gln	Thr	Gln	Arg	Val	Leu	Leu	Glu	
				275					280					285	
Lys	Arg	Arg	Lys	Ala	Ser	Ala	Trp	Gln	Arg	Asn	Leu	Gly	Tyr	Pro	
				290					295					300	
Leu	Ala	Met	Leu	Cys	Leu	Leu	Val	Leu	Thr	Gly	Leu	Ser	Val	Leu	
				305					310					315	
Ile	Val	Ala	Ile	His	Ile	Leu	Glu	Leu	Leu	Ile	Asp	Glu	Ala	Ala	
				320					325					330	
Met	Pro	Arg	Gly	Met	Gln	Gly	Thr	Ser	Leu	Gly	Gln	Val	Ser	Phe	
				335					340					345	
Ser	Lys	Leu	Gly	Ser	Phe	Gly	Ala	Val	Ile	Gln	Val	Val	Leu	Ile	
				350					355					360	
Phe	Tyr	Leu	Met	Val	Ser	Ser	Val	Val	Gly	Phe	Tyr	Ser	Ser	Pro	
				365					370					375	
Leu	Phe	Arg	Ser	Leu	Arg	Pro	Arg	Trp	His	Asp	Thr	Ala	Met	Thr	
				380					385					390	
Gln	Ile	Ile	Gly	Asn	Cys	Val	Cys	Leu	Leu	Val	Leu	Ser	Ser	Ala	
				395					400					405	
Leu	Pro	Val	Phe	Ser	Arg	Thr	Leu	Gly	Leu	Thr	Arg	Phe	Asp	Leu	
				410					415					420	
Leu	Gly	Asp	Phe	Gly	Arg	Phe	Asn	Trp	Leu	Gly	Asn	Phe	Tyr	Ile	
				425					430					435	
Val	Phe	Leu	Tyr	Asn	Ala	Ala	Phe	Ala	Gly	Leu	Thr	Thr	Leu	Cys	

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catcagcaat gaggtgctgc actccc 526

<210> 141
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 141
gactgtatct gagccccaga ctgc 24

<210> 142
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 142
tcagcaatga ggtgctgctc 20

<210> 143
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 143
tgaggaagat gagggacagg ttgg 24

<210> 144
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 144
tatggaagca cctgactacg aagtgtatc cgtgcgagaa cagctattcc 50

<210> 145
<211> 685
<212> DNA
<213> Homo sapiens

<400> 145
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caaacctgtt ttggaattga ggaaacttct cttttgatct cagcccttgg 100
tgggtccaggt cttcatgctg ctgtgggtga tattactggt cctggctcct 150
gtcagtggac agtttgcaag gacacccagg ccattattt tcctccagcc 200
tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaaaaa aatggtacca tcggtacctt 300
 gggaagaaaa tactaagaga aaccccagac aatatccttg aggttcagga 350
 atctggagag tacagatgcc agggccaggg ctcccctctc agtagccctg 400
 tgcacttgga tttttcttca gagatgggat ttctcatgc tgcccaggct 450
 aatgttgaac tcctgggctc aagtgatctg ctcacctagg cctctcaaag 500
 cgtctgggatt acagcttcgc tgatcctgca agctccactt tctgtgttg 550
 aaggagactc tgtgttctg aggtgccggg caaaggcgga agtaacactg 600
 aataatacta ttacaagaa tgataatgta ctggcattcc ttaataaaaag 650
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 146
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 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120

Asp Leu Leu Thr

<210> 147
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 147
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 cgcggcgaggc gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaacacat	ggctccgcag	aacctgagca	ccttttgcoct	gttgtgctga	200
tacctcatcg	ggcggtgat	tgccggacga	gattttctata	agatcttggg	250
ggtgcctcga	agtgccctcta	taaaaggatat	taaaaaggcc	tataggaaac	300
tagccctgca	gcttcatccc	gaccggaacc	ctgatgatcc	acaagcccag	350
gagaaattcc	aggatctggg	tgtctgcttat	gaggttctgt	cagatagtga	400
gaaacggaaa	cagtacgata	cttatggtga	agaaggatta	aaagatggtc	450
atcagagctc	ccatggagac	attttttcac	acttctttgg	ggattttgg	500
ttcatgtttg	gaggaacccc	tcgtcagcaa	gacagaaata	ttccaagagg	550
aagtgatatt	attgtagatc	tagaagtcac	tttggaagaa	gtatatgcag	600
gaaattttgt	ggaagtagtt	agaaaacaaac	ctgtggcaag	gcaggctcct	650
ggcaaacgga	agtgcaattg	tcggccaagag	atgcggacca	cccagctggg	700
ccctgggcgc	ttccaaatga	cccaggaggt	ggtctgcgac	gaatgcctta	750
atgtcaaaat	agtgaatgaa	gaacgaacgc	tggaagtaga	aatagagcct	800
ggggtgagag	acggcatgga	gtaccccttt	attggagaag	gtgagcctca	850
cgtggaatgg	gagcctggag	atttacggtt	ccgaatcaaa	gttgtcaagc	900
acccaatatt	tgaaaggaga	ggagatgatt	tgtacacaaa	tgtgacaatc	950
tcattagtgt	agtcactggt	tggctttgag	atggatatta	ctcacttgga	1000
tggtcacaag	gtacatat	ttccgggataa	gatcaccagg	ccaggagcga	1050
agctatggaa	gaaaggggaa	gggctcccca	actttgacaa	caacaatatc	1100
aagggtcttt	tgataatcac	ttttgatgtg	gattttccaa	aagaacagtt	1150
aacagaggaa	gcgagagaag	gtatcaaaca	gctactgaaa	caagggtcag	1200
tgcagaaggt	atacaatgga	ctgcaaggat	attgagagtg	aataaaaattg	1250
gactttgttt	aaaataagtg	aataaagcat	atttattatc	tgcaaggttt	1300
ttttgtgtgt	gtttttgttt	ttatttttcaa	tatgcaagtt	aggcttaatt	1350
tttttatata	atgatcatca	tgaatgaat	aagagggcct	aagaatttgt	1400
ccatttgcac	tcggaaaaaa	atgaccagca	aaaggtttac	taatacctct	1450
ccctttgggg	atttaattgtc	tggtgtctgcc	gcctgagttt	caagaatttaa	1500
agctgcaaga	ggactccagg	agcaaaagaa	acacaatata	gagggttgga	1550
gttgtagtga	atttcattca	aaatgccaac	tggaagaagtc	tgtttttaaa	1600
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<210> 148
<211> 358
<212> PRT
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<213> Homo sapiens

<400> 148

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Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile
				20					25				30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala
				35					40				45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp
				50					55				60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr
				65					70				75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr
				80					85				90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp
				95					100				105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly
				110					115				120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile
				125					130				135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn
				140					145				150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro
				155					160				165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln
				170					175				180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp
				185					190				195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu
				200					205				210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe
				215					220				225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu
				230					235				240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg
				245					250				255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser
				260					265				270
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys
				275					280				285
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu
				290					295				300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys
 305 310
 Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln
 320 325
 Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln
 335 340 345
 Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr
 350 355

<210> 149
 <211> 509
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> unsure
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,
 482
 <223> unknown base

<400> 149
 tgggaccagg gaaccccggtg ccccccggtg gagngcctaa caggccggtg 50
 gntgcgacgg aagcggcggtg cggaggaggt tttgaggatt tttggaacag 100
 gaccocggaca gaggaacat ggttcgcag aacntgagca cnttttgctt 150
 gttgntgnta tacttcacgc gggcggtgat tgcgcgacga gatttntata 200
 agattttggg gtgcctngaa gtgccttnta taaagatat taaaaagcc 250
 tataggaaac tagccctgca gntttatccc gacoggaacc ctgatgatcc 300
 acaagccag gagaaattcc aggatgtggg tgcgtcttat gaggttntgt 350
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400
 aaagatggtn atcagagctc ccatggagac attttttcac acttntttgg 450
 ggattttggt ttcatgtttg gaggaacccc tngtcagcaa gacagaaata 500
 ttccaagag 509

<210> 150
 <211> 1532
 <212> DNA
 <213> Homo sapiens

<400> 150
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 aggcctcag gtctctgcag gtgtcgtgga ggaacctagc acctgccatc 100
 ctcttcccca atttgccact tccagcagct ttagcccatg agggagatgt 150
 gaccgggact gagtcaggag ccctctggaa gcacggagac tgtgtgtgatt 200
 gttgccatag gtgtgtgtgc caccatcttt ctggcttcgt ttgacgcctt 250
 ggtgctggtt tgcaggcagc gctactgccg gccgcgagac ctgtgcgcagc 300

	35	40	45
Ile Val Asp Leu	Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser		
	50	55	60
Glu Leu Glu Leu Asp Asp Val Val Ile Thr Asn Pro His Ile Glu			
	65	70	75
Ala Ile Leu Glu Asn Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu			
	80	85	90
Met Ser His Cys Ile Ala Ile Leu Lys Ile Cys His Thr Leu Thr			
	95	100	105
Glu Lys Leu Val Ala Met Thr Met Gly Ser Gly Ala Lys Met Lys			
	110	115	120
Thr Ser Ala Ser Val Ser Asp Ile Ile Val Val Ala Lys Arg Ile			
	125	130	135
Ser Pro Arg Val Asp Asp Val Val Lys Ser Met Tyr Pro Pro Leu			
	140	145	150
Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr Ala Leu Leu Leu Ser			
	155	160	165
Val Ser His Leu Val Leu Val Thr Arg Asn Ala Cys His Leu Thr			
	170	175	180
Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu			
	185	190	195
His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp			
	200	205	210
Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala			
	215	220	225

Ile

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
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 tgcgcgtgt cccaccact gcagccatga tctccttaac ggacacgcag 100
 aaaattggaa tgggattaac aggatttgga gtgtttttcc tgttctttgg 150
 aatgattctc ttttttgaca aagcactact ggctatttga aatgttttat 200
 ttgtagccgg ctgggctttt gtaattgggt tagaaagaac attcagattc 250
 ttcttccaaa aacataaaat gaaagctaca ggtttttttc tgggtggtgt 300

attttagtgc cttattgggtt ggcctttgat aggcattgac ttcgaaattt 350
 atggattttt tctcttggtc aggggcttct ttcctgtcgt tgttggcttt 400
 attagaagag tgcagtcctc tggatccctc cttaaatttac ctggaattag 450
 atcatttgta gataaagttg gagaagcaa caatatggta taacaacaag 500
 tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550
 agaattattca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600
 tacaggagtt taaaacgtat agcctacaaa gtaccagcag caaattagca 650
 aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700
 caagcaaact gagagaggtg aaatccatgt taatgatgct taagaaactc 750
 ttgaaggcta tttgtgttgt ttttccacaa tgtgcgaaac tcagccatcc 800
 ttagagaact gtgggtgctg tttcttttct tttttatttg aaggctcagg 850
 agcatccata ggcatttgct ttttagaagt gtccactgca atggcaaaaa 900
 tatttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgatttga 950
 ttgtgtcatt ttaaagtatt aaaaccaagg aaaccccaat tttgatgtat 1000
 ggattacttt tttttgngcn cagggcc 1027

<210> 153
 <211> 138
 <212> PRT
 <213> Homo sapiens

<220>
 <221> N-myristoylation Sites
 <222> 11-16, 51-56 and 116-121
 <223> N-myristoylation Sites.
 <220>
 <221> Transmembrane domains
 <222> 12-30, 33-52, 69-89 and 93-109
 <223> Transmembrane domains

<220>
 <221> Aminoacyl-transfer RNA Synthetases.
 <222> 49-59
 <223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153
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 Gly Phe Gly Val Phe Phe Leu Phe Phe Gly Met Ile Leu Phe Phe
 20 25 30
 Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly
 35 40 45
 Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe
 50 55 60

caacaccatt cagctcttca ctctcctoct ctggccatt aacaagcagc 300
 ttttcggaa gatcaactgc agactgtcct attgcatctc aagccagctg 350
 gtgatgctgc tggagtggg gtcgggcacg gaatgcacca tcttcacgga 400
 ccgcgcgcgc tacctcaagt atgggaagga aaatgccatc gtggttctca 450
 accacaagtt tgaattgac tttctgtgtg gctggagcct gtccgaacgc 500
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 tgtcccaatt atcggctgga tgtgttactt caccgagatg gtcttctgtt 600
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 ctccgggact accccgagaa gtattttttc ctgattcact gtgagggcca 700
 acggttcacg gagaagaagc atgagatcag catgcagggt gcccgggcca 750
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 gccatcacgg tgaggagcct gagaaatga gtttcagctg tatatgactg 850
 tacactcaat ttcagaaata atgaaaatcc aacctgctg ggagtccata 900
 acggaagaa ataccatgca gatttgtatg ttagggagat ccaactggaa 950
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 cagagacgcc catggtgccc ccccgcgggc cctggaccc cgtgaactgg 1100
 ctgttttggg cctcgtggtt gctctaccct ttcttccagt tcttggtcag 1150
 catgatcagg agcgggtctt cctgacgct ggccagcttc atcctcgtct 1200
 tctttgtggc ctccgtggga gttcgatgga tgattggtgt gacggaaatt 1250
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 ctgactcagg gaggtgtcac catccgaagg gaaccttggg gaactggtgg 1350
 cctctgcata tcctccttag tgggacacgg tgacaaaggc tgggtgagcc 1400
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 gcttttagtg gctttggtt tctttttgtg cgagtgtgtg tgagaatggc 1550
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 gctgcagggg agggcagggc tggggaccga aggggacaag ttcccccttc 1650
 atccttttgt gctgagtttt ctgtaaccct tggttgccag agataaagt 1700
 aaaagtgtt taggtgagat gactaaatta tgccccaag aaaaaaaaaa 1750
 taaagtgtt ttctgggtca aaaaaaaaaa a 1781

<210> 156

<211> 378
 <212> PRT
 <213> Homo sapiens

<400> 156

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				20					25					30	
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu	
				35					40					45	
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln	
				50					55					60	
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile	
				65					70					75	
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala	
				80					85					90	
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly	
				95					100					105	
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val	
				110					115					120	
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met	
				125					130					135	
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln	
				140					145					150	
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr	
				155					160					165	
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe	
				170					175					180	
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys	
				185					190					195	
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly	
				200					205					210	
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val	
				215					220					225	
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu	
				230					235					240	
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val	
				245					250					255	
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys	
				260					265					270	
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln	
				275					280					285	
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val	

	290		295		300									
Pro	Pro	Arg	Arg	Pro	Trp	Thr	Leu	Val	Asn	Trp	Leu	Phe	Trp	Ala
				305					310					315
Ser	Leu	Val	Leu	Tyr	Pro	Phe	Phe	Gln	Phe	Leu	Val	Ser	Met	Ile
				320					325					330
Arg	Ser	Gly	Ser	Ser	Leu	Thr	Leu	Ala	Ser	Phe	Ile	Leu	Val	Phe
				335					340					345
Phe	Val	Ala	Ser	Val	Gly	Val	Arg	Trp	Met	Ile	Gly	Val	Thr	Glu
				350					355					360
Ile	Asp	Lys	Gly	Ser	Ala	Tyr	Gly	Asn	Ser	Asp	Ser	Lys	Gln	Lys
				365					370					375
Leu Asn Asp														

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

<400> 157
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 tactgattcc caaatggatg atgttgaagt tgtttatata attgacattc 200
 agaaatatat tccatgctat cagcttttta gctttataa ttcttcaggc 250
 gaagtaaatg agcaagcact gaagaaaata ttatcaaagc tcaaaaagaa 300
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 acagggtacc ttagtggtt gccaatctgg gcatgtctga acaactgggt 550
 tataaaactg tatcagggtc ctgtatgtcc actggtttta gcgagcagt 600
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 tacataagat aatgaaatg tatgcttcat tacaagagga attaaagagt 700
 atatgcaaaa aagtgaaga cagtgaacaa gcagtagata aactagtaaa 750
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[illegible]

<210> 159
 <211> 2651
 <212> DNA
 <213> Homo sapiens

<400> 159
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 cgcgcgccac accctctcgc gtcccccggc cgcctgccac ccttccctcc 150
 ttcccccgcgt cccgcctcgc ccggccagtc agcttgccgg gttcgtgcc 200
 ccgcgaaacc ccgaggtcac cagcccgccg ctctgcttcc ctgggcgcgc 250
 cgcgcctcc acgcctcctc tctccctcgc cccggcgctt ggacccgggg 300
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 ctgcctagtc ccgactccg ccagccctgc gcccgctgcc gtacgcgccg 450
 ttcccgctgc gtcccaaagg tgggaacgcg tccgcccggc ccgcaccat 500
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 ctotattatt tgtttgatg tttttttctc atttcgtttg tgggtttttt 2500
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 c 2651

<210> 160
 <211> 556
 <212> PRT
 <213> Homo sapiens

<400> 160
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 20 25 30
 Ser Glu Val Arg Arg Leu Tyr Val Ser Lys Gly Phe Asn Lys Asn

35	40	45
Asp Ala Pro Leu His Glu Ile Asn Gly Asp His Leu Lys Ile Cys	50	55 60
Pro Gln Gly Ser Thr Cys Cys Ser Gln Glu Met Glu Glu Lys Tyr	65	70 75
Ser Leu Gln Ser Lys Asp Asp Phe Lys Ser Val Val Ser Glu Gln	80	85 90
Cys Asn His Leu Gln Ala Val Phe Ala Ser Arg Tyr Lys Lys Phe	95	100 105
Asp Glu Phe Phe Lys Glu Leu Leu Glu Asn Ala Glu Lys Ser Leu	110	115 120
Asn Asp Met Phe Val Lys Thr Tyr Gly His Leu Tyr Met Gln Asn	125	130 135
Ser Glu Leu Phe Lys Asp Leu Phe Val Glu Leu Lys Arg Tyr Tyr	140	145 150
Val Val Gly Asn Val Asn Leu Glu Glu Met Leu Asn Asp Phe Trp	155	160 165
Ala Arg Leu Leu Glu Arg Met Phe Arg Leu Val Asn Ser Gln Tyr	170	175 180
His Phe Thr Asp Glu Tyr Leu Glu Cys Val Ser Lys Tyr Thr Glu	185	190 195
Gln Leu Lys Pro Phe Gly Asp Val Pro Arg Lys Leu Lys Leu Gln	200	205 210
Val Thr Arg Ala Phe Val Ala Ala Arg Thr Phe Ala Gln Gly Leu	215	220 225
Ala Val Ala Gly Asp Val Val Ser Lys Val Ser Val Val Asn Pro	230	235 240
Thr Ala Gln Cys Thr His Ala Leu Leu Lys Met Ile Tyr Cys Ser	245	250 255
His Cys Arg Gly Leu Val Thr Val Lys Pro Cys Tyr Asn Tyr Cys	260	265 270
Ser Asn Ile Met Arg Gly Cys Leu Ala Asn Gln Gly Asp Leu Asp	275	280 285
Phe Glu Trp Asn Asn Phe Ile Asp Ala Met Leu Met Val Ala Glu	290	295 300
Arg Leu Glu Gly Pro Phe Asn Ile Glu Ser Val Met Asp Pro Ile	305	310 315
Asp Val Lys Ile Ser Asp Ala Ile Met Asn Met Gln Asp Asn Ser	320	325 330
Val Gln Val Ser Gln Lys Val Phe Gln Gly Cys Gly Pro Pro Lys	335	340 345
Pro Leu Pro Ala Gly Arg Ile Ser Arg Ser Ile Ser Glu Ser Ala		

350	355	360
Phe Ser Ala Arg	Phe Arg Pro His His	Pro Glu Glu Arg Pro Thr
365	370	375
Thr Ala Ala Gly	Thr Ser Leu Asp Arg	Leu Val Thr Asp Val Lys
380	385	390
Glu Lys Leu Lys	Gln Ala Lys Lys Phe	Trp Ser Ser Leu Pro Ser
395	400	405
Asn Val Cys Asn	Asp Glu Arg Met Ala	Ala Gly Asn Gly Asn Glu
410	415	420
Asp Asp Cys Trp	Asn Gly Lys Gly Lys	Ser Arg Tyr Leu Phe Ala
425	430	435
Val Thr Gly Asn	Gly Leu Ala Asn Gln	Gly Asn Asn Pro Glu Val
440	445	450
Gln Val Asp Thr	Ser Lys Pro Asp Ile	Leu Ile Leu Arg Gln Ile
455	460	465
Met Ala Leu Arg	Val Met Thr Ser Lys	Met Lys Asn Ala Tyr Asn
470	475	480
Gly Asn Asp Val	Asp Phe Phe Asp Ile	Ser Asp Glu Ser Ser Gly
485	490	495
Glu Gly Ser Gly	Ser Gly Cys Glu Tyr	Gln Gln Cys Pro Ser Glu
500	505	510
Phe Asp Tyr Asn	Ala Thr Asp His Ala	Gly Lys Ser Ala Asn Glu
515	520	525
Lys Ala Asp Ser	Ala Gly Val Arg Pro	Gly Ala Gln Ala Tyr Leu
530	535	540
Leu Thr Val Phe	Cys Ile Leu Phe Leu	Val Met Gln Arg Glu Trp
545	550	555

Arg

<210> 161
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 161
 ctcctgtgta aacccccacag ccc 23

<210> 162
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

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<400> 162
tcacatcgat gggatccatg accg 24

<210> 163
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 163
ggtctcgtga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164
<211> 870
<212> DNA
<213> Homo sapiens

<400> 164
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ggaaccttcc attatattct tcaagcaact tacagctgca cgcacagtgt 150
cgatgaaagt tctaattctt tccctcctcc tgttgctgcc actaatgctg 200
atgtccatgg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250
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tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450
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actctcccac tgtaccacc cctaatacat tccagtgtgc tcaaaaagca 650
tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttcttctct 700
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ctgaagatt ccaggaaact gtactttcct agctagtgtc atttaacctt 800
aatgcaatc aggaagtag caaacagaag tcaataaata tttttaaatg 850
tcaaaaaaaaa aaaaaaaaaa 870

<210> 165
<211> 119
<212> PRT
<213> Homo sapiens

<400> 165
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Leu Pro Leu Met

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	20	25	30
Gly His Arg Asp	Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln	Glu	
	35	40	45
Gly Gly Gln Glu	Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro		
	50	55	60
Arg Arg Lys Phe	Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys		
	65	70	75
Pro Cys Asp His	Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln		
	80	85	90
Arg His His Arg	Lys Pro Asn Lys His Ser Arg Ala Cys Gln Cys		
	95	100	105
Phe Leu Lys Gln	Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu		
	110	115	

<210> 166
 <211> 551
 <212> DNA
 <213> Homo sapiens

<400> 166
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 ccagacgact cgggcaaaga cccaaagcca gacttcccc aattcctaag 150
 cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200
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 tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450
 ttttagaaag ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500
 agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 a 551

<210> 167
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 167
 Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu
 1 5 10 15
 Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

	20		25		30
Asp Asp Lys Pro	Asp Asp Ser Gly Lys	Asp Pro Lys Pro Asp Phe			
	35	40			
Pro Lys Phe Leu	Ser Leu Leu Gly Thr	Glu Ile Ile Glu Asn Ala			
	50	55			
Val Glu Phe Ile	Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met				
	65	70			
Glu Phe Asp Asp	Asn Glu Gly Lys His Ser Ser Lys				
	80	85			

<210> 168
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 168
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 tgggtgctg cgagcccctg tgcaaaagct acttccccta cctgatggcc 200
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 gacagtgaag aagctctact tctacgctga ccaggaggag aaactactag 1050
 accctgttgt atcctcaact gcaagtttct ggactagtct cccaacgttt 1100

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly
 230 235
 Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys
 245 250 255
 Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile
 260 265 270
 Tyr Leu Pro Leu Arg Gly Thr
 275

<210> 170
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 170
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 agatgtcatt ccgtaaagta aacatcatca tottggtcct ggctgttgt 200
 ctctctttac tggttttgca ccataacttc ctcagcttga gcagtttgtt 250
 aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300
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 cctgtggtca tcgctgcac tgaagacagg cttggggggg ccattgcagc 400
 tataaacagc attcagcaca aactctgcct caatgtgatt ttctacattg 450
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 taaataaaac ttacattttt c 1621

<210> 171
 <211> 371
 <212> PRT
 <213> Homo sapiens

<400> 171
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 Ala Leu Phe Leu Leu Val Leu His His Asn Phe Leu Ser Leu Ser
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 Ser Leu Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro
 35 40 45
 Gln Pro Ile Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp
 50 55 60
 Gly Arg Gln Glu Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp
 65 70 75
 Arg Leu Gly Gly Ala Ile Ala Ala Ile Asn Ser Ile Gln His Asn
 80 85 90
 Thr Arg Ser Asn Val Ile Phe Tyr Ile Val Thr Leu Asn Asn Thr
 95 100 105
 Ala Asp His Leu Arg Ser Trp Leu Asn Ser Asp Ser Leu Lys Ser
 110 115 120
 Ile Arg Tyr Lys Ile Val Asn Phe Asp Pro Lys Leu Leu Glu Gly
 125 130 135
 Lys Val Lys Glu Asp Pro Asp Gln Gly Glu Ser Met Lys Pro Leu
 140 145 150
 Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu Val Pro Ser Ala Lys
 155 160 165
 Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val Gln Gly Asp Ile
 170 175 180
 Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His Ala Ala Ala

aagtaaagga ggatcctgac cagggggaat ccatgaaacc tttaaccttt 400
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 catgatgat gatgtaattg tgcaagtgga tattcttgcc ctttacaata 500
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<210> 173
 <211> 1866
 <212> DNA
 <213> Homo sapiens

<400> 173
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 aacgcgggag gccagacaac gggctgggct ccggggcctg cggcgcgagg 150
 gctgagctgg cagggggggt cggggcgagg gctgcatccg catctctccc 200
 atgcctgca gtaaggcgag ccgcggcgag cctttgaggg gaacgacttg 250
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 tgcattttca gaagatttggt attcagcctc tactaaagtt gtcacccgtg 1000
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 cattggaatg gacatttgaa gccatgggga aggactgctt catatactga 1400
 tgtttgggga aaaatggtat attccagacc caacaggcaa attcaaccta 1450
 atcgaagat ataccgagat ctcaaacata aagtgaaca gaatttgaac 1500
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1. **1.1** The first part of the document is the title page, which includes the title, author, and date.

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1. **1.1** The first part of the document is the title page, which includes the title, author, and date.

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Ser Gly Ile Arg	Tyr Met Trp Ser Tyr	His Leu Ile Gly Leu	Ile
	170	175	180
Trp Thr Ser Glu	Phe Ile Leu Ala Cys	Gln Gln Met Thr Ile	Ala
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Gly Ala Val Val	Thr Cys Tyr Phe Asn	Arg Ser Lys Asn Asp	Pro
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Pro Asp His Pro	Ile Leu Ser Ser Leu	Ser Ile Leu Phe Phe	Tyr
	215	220	225
His Gln Gly Thr	Val Val Lys Gly Ser	Phe Leu Ile Ser Val	Val
	230	235	240
Arg Ile Pro Arg	Ile Ile Val Met Tyr	Met Gln Asn Ala Leu	Lys
	245	250	255
Glu Gln Gln His	Gly Ala Leu Ser Arg	Tyr Leu Phe Arg Cys	Cys
	260	265	270
Tyr Cys Cys Phe	Trp Cys Leu Asp Lys	Tyr Leu Leu His Leu	Asn
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Gln Asn Ala Tyr	Thr Thr Thr Ala Ile	Asn Gly Thr Asp Phe	Cys
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Thr Ser Ala Lys	Asp Ala Phe Lys Ile	Leu Ser Lys Asn Ser	Ser
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His Phe Thr Ser	Ile Asn Cys Phe Gly	Asp Phe Ile Ile Phe	Leu
	320	325	330
Gly Lys Val Leu	Val Val Cys Phe Thr	Val Phe Gly Gly Leu	Met
	335	340	345
Ala Phe Asn Tyr	Asn Arg Ala Phe Gln	Val Trp Ala Val Pro	Leu
	350	355	360
Leu Leu Val Ala	Phe Phe Ala Tyr Leu	Val Ala His Ser Phe	Leu
	365	370	375
Ser Val Phe Glu	Thr Val Leu Asp Ala	Leu Phe Leu Cys Phe	Ala
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Met Asp Gln Glu	Phe Leu Ser Phe Val	Lys Arg Ser Asn Lys	Leu

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Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val
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Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly
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Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val
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Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu
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Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr
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Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr
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Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly

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Pro	Thr	Asp	Lys	Val	410	Glu	Glu	Ala	Ser	Arg	415	Leu	Ala	Arg	Glu	Ser	420
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Cys	Arg	Thr	Asn	Gly	455	Phe	Tyr	Ser	Leu	His	460	Val	Gln	Ser	Trp	Phe	465
Gly	Leu	His	Lys	Thr	470	Leu	Gln	Pro	Leu	Val	475	Lys	Arg	Val	Cys	Asp	480
Thr	Asp	Arg	Leu	Ala	485	Cys	Ser	Lys	Thr	Cys	490	Leu	Asn	Ser	Ala	Asp	495
Ile	Gly	Phe	Val	Ile	500	Asp	Gly	Ser	Ser	Ser	505	Val	Gly	Thr	Gly	Asn	510
Phe	Arg	Thr	Val	Leu	515	Gln	Phe	Val	Thr	Asn	520	Leu	Thr	Lys	Glu	Phe	525
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Pro	Asp	Ile	Leu	Asn	560	Ala	Ile	Lys	Arg	Val	565	Gly	Tyr	Trp	Ser	Gly	570
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Phe	Lys	Lys	Ser	Lys	590	Pro	Asn	Lys	Arg	Lys	595	Leu	Met	Ile	Leu	Ile	600
Thr	Asp	Gly	Arg	Ser		Tyr	Asp	Asp	Val	Arg		Ile	Pro	Ala	Met	Ala	

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Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
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 Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn
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Gly Leu Val Gly	Asn His Ile Asp Val Leu Thr Gly Lys Trp Val				
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Tyr Leu Val Lys	Gly Ala Ile Leu Leu Gln Asp Lys Lys Leu Met				
	230	235			240
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Ser Met Pro Val	Phe Gln Ser Leu Glu Ala Tyr Trp Pro Gly Leu				
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Pro Leu Arg Pro	Glu Leu Ile Glu Ser Ala Met Tyr Leu Tyr Arg				
	335	340			345
Ala Thr Gly Asp	Pro Thr Leu Leu Glu Leu Gly Arg Asp Ala Val				
	350	355			360
Glu Ser Ile Glu	Lys Ile Ser Lys Val Glu Cys Gly Phe Ala Thr				
	365	370			375
Ile Lys Asp Leu	Arg Asp His Lys Leu Asp Asn Arg Met Glu Ser				
	380	385			390
Phe Phe Leu Ala	Glu Thr Val Lys Tyr Leu Tyr Leu Leu Phe Asp				
	395	400			405
Pro Thr Asn Phe	Ile His Asn Asn Gly Ser Thr Phe Asp Ala Val				
	410	415			420
Ile Thr Pro Tyr	Gly Glu Cys Ile Leu Gly Ala Gly Gly Tyr Ile				
	425	430			435
Phe Asn Thr Glu	Ala His Pro Ile Asp Leu Ala Ala Leu His Cys				

440	445	450
Cys Gln Arg Leu	Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu Met
455	460	465
Arg Glu Phe Tyr	Ser Leu Lys Arg Ser	Arg Ser Lys Phe Gln Lys
470	475	480
Asn Thr Val Ser	Ser Gly Pro Trp Glu	Pro Pro Ala Arg Pro Gly
485	490	495
Thr Leu Phe Ser	Pro Glu Asn His Asp	Gln Ala Arg Glu Arg Lys
500	505	510
Pro Ala Lys Gln	Lys Val Pro Leu Leu	Ser Cys Pro Ser Gln Pro
515	520	525
Phe Thr Ser Lys	Leu Ala Leu Leu Gly	Gln Val Phe Leu Asp Ser
530	535	540

Ser

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
 aaagttacat ttctctgga actctcctag gccactccct gctgatgcaa 50
 catctggggtt tgggcagaaa ggaggggtgct tcggagcccg ccctttctga 100
 gcttcctggg ccggtcttag aacaattcag gcttcgtctg cactcagacc 150
 tcagctocaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200
 gctttatttt gaaaagaaac aatgttctag gtcaaactga gtctacaaa 250
 tgcagaacttt cacaatgggt ctagaagaaa tctggacaag tcttttcatg 300
 tggttttttt acgcattgat tccatgtttg ctcacagatg aagtggccat 350
 tetgctgtcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400
 tcttgatgtg gagcccagtg atcgcgcctg gagaaacagt gtactattct 450
 gtcgaaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500
 cccagcagc tgggtgtcac tcaactgaagg tctgtagtgt gatgtcaactg 550
 atgacatcac ggccaactgt ccatacaacc ttcgtgtcag ggccacattg 600
 ggctcacaga cctcagcctg gagcatcctg aagcatccct ttaatatgaa 650
 ctcaaccatc cttaccgcac ctgggatgga gatcaccaaa gatgcttcc 700
 acctggttat tgagctggag gacctggggc cccagtttga gttccttgtg 750
 gcctactgga ggagggagcc tgggtcgogag gaacatgtoa aaatgggtgag 800
 gagtgggggt attccagtgc acctagaaac catggagcca ggggctgcat 850

actgtgtgaa ggcccagaca ttctgtgaagg ccattgggag gtacagcgcc 900
 ttacgccaga cagaatgtgt ggaggtgcaa ggagaggcca ttccccctggt 950
 actggccctg tttgcctttg ttggcttcat gctgatcctt gtggtctgtgc 1000
 cactgttctg ctggaaaatg ggccggctgc tccagtactc ctgttgcccc 1050
 gtggtggtcc tcccagacac ctgaaaaata accaattcac ccagaagtt 1100
 aatcagctgc agaaggagg aggtggatgc ctgtgccacg gctgtgatgt 1150
 ctctgagga actcctcagg gcctggatct cataggtttg cggaagggcc 1200
 cagggtgaagc cgagaacctg gtctgcatga catggaaacc atgaggggac 1250
 aagttgtgtt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300
 gagcctgttg tctacaagtc tagaagcaac catcagagcg aggtgtgttt 1350
 gtctaacaga aactgactg aggcttaggg gatgtgacct ctgactggg 1400
 gggtgccact tgctggctga gcaaccctgg gaaaagtgc ttcattccctt 1450
 cggctctaag ttttctcctc tgtaatgggg gaattaccta cacacctgct 1500
 aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550
 tacacccagc acttgcaagg ctagaggga actggtgaca ctctacagtc 1600
 tgactgattc agtgtttctg gagagcagga cataaatgta tgaatgagaat 1650
 gatcaaggac tctacacact gggtggcttg gagagccac tttccagaa 1700
 taatccttga gagaaaagga atcatgggag caatggtgtt gagtccactt 1750
 caagcccaat gccggtgcag aggggaatgg cttagcgagc tctacagtag 1800
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850
 acggaggatc catgaactac tgtaaaagtgt tgacagtgtg tgcacactgc 1900
 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgtctcctt tttctgtttg taaagtacag 2000
 aattcagcaa ataaaaagg ccaccctggc caaaagcggg aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183
 <211> 311
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-29
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu	
1					5				10					15	
Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp	
				20					25					30	
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	
				35					40					45	
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	
				50					55					60	
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	
				65					70					75	
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	
				80					85					90	
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	
				95					100					105	
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	
				110					115					120	
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	
				125					130					135	
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	
				140					145					150	
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	
				155					160					165	
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	
				170					175					180	
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	
				185					190					195	
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	
				200					205					210	
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	
				215					220					225	

Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe	
				230					235					240	
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp	
				245					250					255	
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val	
				260					265					270	
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile	
				275					280					285	
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met	
				290					295					300	
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser					
				305					310						

<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
 tcctgctgat gcacatctgg gtttggcaaa aggaggttgc ttcgagccgc 50
 cctttctagc ttctggccg gctctagaac aattcaggct tcgctgcgac 100
 tagacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150
 agaatgcttt attttggaaa gaaacaatgt tctaggtcaa actgagtcta 200
 ccaaatgcag actttcacia tggttctaga agaaatctgg acaagtcttt 250
 tcatgtggtt ttctacgca ttgattccat gtttgcacac agatgaagtg 300
 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350
 gcatctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400
 attctgtcga ataccagggg gactacgaga gcctgtacac gagccacatc 450
 tggatcccca gcagctgggt ctcactcact gaaggtcctg agtgtgatgt 500
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggccca 550
 cattgggctc acagacctca gcctggagca tcctgaagca tccctttaat 600
 agaaactcaa ccatccttac ccgacctggg atggagatca ccaaagatgg 650
 cttncacctg gttattgagc tggaggacct ggggccccag ttgagtctcc 700
 ttgtggccta ntggaggagg ggcgaacccc ttgcgcgcca aggggttngc 750
 gaacctcttg cggccgctgg ggtatctctc gagaaaaag aggcccaata 800
 tgacccac 808

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
aggcttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggctcggg taaggatggt tgag 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
ttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
cggacgcgtg ggccgccacc tccggaacaa gccatggtgg cggcgacggt 50
ggcagcggcg tggctgctcc tgtgggctgc ggcctgcgcg cagcaggagc 100
aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250
acctggggccc ccaccacttt aacgtgctcg ccttcccctg caaccagttt 300
ggccaacagg agcctgacag caacaaggag attgagagct ttgccgcgcg 350
cacctacagt gtctcattcc ccatgtttag caagattgca gtcaccggta 400
ctggtgccca tctgccttc aagtacctgg ccagacttc tgggaaggag 450
cccacctgga acttctggaa gtacctagta gcccagatg gaaaggtggt 500
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga cccagatca 550
cagcgctcgt gaggaagctc atcctactga agcgagaaga cttataacca 600

ccgcgtctcc tcctccacca cctcatcccg cccacctgtg tggggctgac 650
 caatgcaaac tcaaatgggtg cttcaaaggg agagaccac tgactctcct 700
 tcctttactc ttatgccatt ggtcccatca ttctgtggg ggaataatc 750
 tagtattttg attatttgaa tcttacagca acaaatagga actcctggcc 800
 aatgagagct cttgaccagt gaatcaccag cgcatacgaa cgtcttgcca 850
 acaaaaatgt gtggcaata gaagtatac aagcaataat cccccacca 900
 aggtctctgt aaactgggac caatgattac ctcatagggc tgtgtgagg 950
 attaggatga aatacctgtg aaagtgccta ggcagtgcc aaccaatagg 1000
 aggcattcaa tgaacatttt ttgcatataa accaaaaaat aacttgttat 1050
 caataaaaac ttgcatccaa catgaatttc cagccgatga taatccaggc 1100
 caaaggttta gttgttgta ttctctctgt attattttct tcattacaaa 1150
 agaaatgcaa gttcattgta acaatccaaa caatacctca cgatataaaa 1200
 taaaaatgaa agtatcctcc tcaaaaa 1227

<210> 189
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 189
 Met Val Ala Ala Thr Val Ala Ala Ala Trp Leu Leu Leu Trp Ala
 1 5 10 15
 Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala
 20 25 30
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly
 35 40 45
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr
 50 55 60
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly
 65 70 75
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly
 80 85 90
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg
 95 100 105
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val
 110 115 120
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr
 125 130 135
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala
 140 145 150
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

	155	160	165
Glu Glu Val Arg	Pro Gln Ile Thr Ala	Leu Val Arg Lys Leu	Ile
	170	175	180
Leu Leu Lys Arg	Glu Asp Leu		
	185		

<210> 190
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 190
 gcaggacttc tacgacttca aggc 24

<210> 191
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 191
 agtctgggcc aggtacttga aggc 24

<210> 192
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 192
 caacatccgg ggcaaaactgg tgctcgtgga gaagtaccgc ggatcggtgt 50

<210> 193
 <211> 2187
 <212> DNA
 <213> Homo sapiens

<400> 193
 cggacgcgtg ggcgggccgg gacgcagggc aaagcgagcc atggctgtct 50
 acgtcgggat gctgcgcctg gggaggctgt gcgccgggag ctcggggggtg 100
 ctggggggccc gggcgcgcct ctctcggagt tggcaggaag ccaggttgca 150
 ggggtgtccg ttcctcagtt ccagagaggt ggatcgcagt gtctccacgc 200
 ccatcgagg cctcagctac gttcaggggt gcacccaaaa gcatcttaac 250
 agcaagactg tgggccagt cctggagacc acagcacaga gggctcccaga 300
 acgagaggcc ttggtcgtcc tccatgaaga cgtcagggtg acctttgcc 350
 aactcaagga ggaggtggac aaagctgctt ctggcctcct gagcattggc 400

aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050
aactgcgctg gccacaaggt gccaaaaggc aggcagcctg cccaggccct 2100
ccctcctgtc catccccac attccctgt ctgtccttgt gatttggcat 2150
aaagagcttc tgttttcttt gaaaaaaaaa aaaaaa 2187

<210> 194

<211> 615

<212> PRT

<213> Homo sapiens

<400> 194

Met	Ala	Val	Tyr	Val	Gly	Met	Leu	Arg	Leu	Gly	Arg	Leu	Cys	Ala	1	5	10	15
Gly	Ser	Ser	Gly	Val	Leu	Gly	Ala	Arg	Ala	Ala	Leu	Ser	Arg	Ser	20	25	30	
Trp	Gln	Glu	Ala	Arg	Leu	Gln	Gly	Val	Arg	Phe	Leu	Ser	Ser	Arg	35	40	45	
Glu	Val	Asp	Arg	Met	Val	Ser	Thr	Pro	Ile	Gly	Gly	Leu	Ser	Tyr	50	55	60	
Val	Gln	Gly	Cys	Thr	Lys	Lys	His	Leu	Asn	Ser	Lys	Thr	Val	Gly	65	70	75	
Gln	Cys	Leu	Glu	Thr	Thr	Ala	Gln	Arg	Val	Pro	Glu	Arg	Glu	Ala	80	85	90	
Leu	Val	Val	Leu	His	Glu	Asp	Val	Arg	Leu	Thr	Phe	Ala	Gln	Leu	95	100	105	
Lys	Glu	Glu	Val	Asp	Lys	Ala	Ala	Ser	Gly	Leu	Leu	Ser	Ile	Gly	110	115	120	
Leu	Cys	Lys	Gly	Asp	Arg	Leu	Gly	Met	Trp	Gly	Pro	Asn	Ser	Tyr	125	130	135	
Ala	Trp	Val	Leu	Met	Gln	Leu	Ala	Thr	Ala	Gln	Ala	Gly	Ile	Ile	140	145	150	
Leu	Val	Ser	Val	Asn	Pro	Ala	Tyr	Gln	Ala	Met	Glu	Leu	Glu	Tyr	155	160	165	
Val	Leu	Lys	Lys	Val	Gly	Cys	Lys	Ala	Leu	Val	Phe	Pro	Lys	Gln	170	175	180	
Phe	Lys	Thr	Gln	Gln	Tyr	Tyr	Asn	Val	Leu	Lys	Gln	Ile	Cys	Pro	185	190	195	
Glu	Val	Glu	Asn	Ala	Gln	Pro	Gly	Ala	Leu	Lys	Ser	Gln	Arg	Leu	200	205	210	
Pro	Asp	Leu	Thr	Thr	Val	Ile	Ser	Val	Asp	Ala	Pro	Leu	Pro	Gly	215	220	225	
Thr	Leu	Leu	Leu	Asp	Glu	Val	Val	Ala	Ala	Gly	Ser	Thr	Arg	Gln	230	235	240	
His	Leu	Asp	Gln	Leu	Gln	Tyr	Asn	Gln	Gln	Phe	Leu	Ser	Cys	His				

245	250	255
Asp Pro Ile Asn	Ile Gln Phe Thr Ser Gly Thr Thr Gly Ser	Pro
260	265	270
Lys Gly Ala Thr	Leu Ser His Tyr Asn Ile Val Asn Asn Ser Asn	
275	280	285
Ile Leu Gly Glu	Arg Leu Lys Leu His Glu Lys Thr Pro Glu Gln	
290	295	300
Leu Arg Met Ile	Leu Pro Asn Pro Leu Tyr His Cys Leu Gly Ser	
305	310	315
Val Ala Gly Thr	Met Met Cys Leu Met Tyr Gly Ala Thr Leu Ile	
320	325	330
Leu Ala Ser Pro	Ile Phe Asn Gly Lys Lys Ala Leu Glu Ala Ile	
335	340	345
Ser Arg Glu Arg	Gly Thr Phe Leu Tyr Gly Thr Pro Thr Met Phe	
350	355	360
Val Asp Ile Leu	Asn Gln Pro Asp Phe Ser Ser Tyr Asp Ile Ser	
365	370	375
Thr Met Cys Gly	Gly Val Ile Ala Gly Ser Pro Ala Pro Pro Glu	
380	385	390
Leu Ile Arg Ala	Ile Ile Asn Lys Ile Asn Met Lys Asp Leu Val	
395	400	405
Val Ala Tyr Gly	Thr Thr Glu Asn Ser Pro Val Thr Phe Ala His	
410	415	420
Phe Pro Glu Asp	Thr Val Glu Gln Lys Ala Glu Ser Val Gly Arg	
425	430	435
Ile Met Pro His	Thr Glu Ala Arg Ile Met Asn Met Glu Ala Gly	
440	445	450
Thr Leu Ala Lys	Leu Asn Thr Pro Gly Glu Leu Cys Ile Arg Gly	
455	460	465
Tyr Cys Val Met	Leu Gly Tyr Trp Gly Glu Pro Gln Lys Thr Glu	
470	475	480
Glu Ala Val Asp	Gln Asp Lys Trp Tyr Trp Thr Gly Asp Val Ala	
485	490	495
Thr Met Asn Glu	Gln Gly Phe Cys Lys Ile Val Gly Arg Ser Lys	
500	505	510
Asp Met Ile Ile	Arg Gly Gly Glu Asn Ile Tyr Pro Ala Glu Leu	
515	520	525
Glu Asp Phe Phe	His Thr His Pro Lys Val Gln Glu Val Gln Val	
530	535	540
Val Gly Val Lys	Asp Asp Arg Met Gly Glu Glu Ile Cys Ala Cys	
545	550	555
Ile Arg Leu Lys	Asp Gly Glu Glu Thr Thr Val Glu Glu Ile Lys	

	560		565		570
Ala Phe Cys Lys	Gly Lys Ile Ser His	Phe Lys Ile Pro Lys	Tyr		
	575		580		585
Ile Val Phe Val	Thr Asn Tyr Pro Leu Thr	Ile Ser Gly Lys Ile			
	590		595		600
Gln Lys Phe Lys	Leu Arg Glu Gln Met	Glu Arg His Leu Asn Leu			
	605		610		615

<210> 195
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 195
 caactccaac atttttaggag agcgcoctgaa actgcatgag aagacaccag 50
 agcagttgag gatgatcctg cccaaccccc tgtaccattg cctgggttcc 100
 gtggcaggca caatgatgtg tctgatgtac ggtgccacc ctcctctggc 150
 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200
 gaggcacctt cctgtatggt acccccacga tggtcgtgga cattotgaac 250
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300
 tgctgggtcc cctgcacctc cagagttgat cggagccatc atcaacaaga 350
 taaatatgaa ggacctggtg gttgcttatg gaaccacaga gaacagtccc 400
 gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaaag 450
 cgtgggcaga attatgcctc acacggaggc gcggatcatg aacatggagg 500
 cagggacgct ggcaaagctg aacacgcccc gggagctgtg catccgaggg 550
 tactgcgtca tgctgggcta ctgggggtgag cctcagaaga cagaggaagc 600
 agtggatcag gacaagtggg attggacagg agatgtcgcc ac 642

<210> 196
 <211> 1575
 <212> DNA
 <213> Homo sapiens

<400> 196
 gagcaggacg gagccatgga ccccgccagg aaagcagggtg cccaggccat 50
 gatctggact gcaggctggc tgctgctgct gctgcttcgc ggaggagcgc 100
 aggccttgga gtgctacagc tgctgacaga aagcagatga cggatgctcc 150
 ccgaacaaga tgaagacagt gaagtgcgcg cggggtgtgg acgtctgcac 200
 cgaggcgtg gggggtgtgg agaccatcca cggacaattc tcgctggcag 250
 tgccgggttg cggttcggga ctccccggca agaatagcgc cggcctggat 300
 cttcacgggc ttctggcggt catccagctg cagcaatgag ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac ccggcaggta 400
 atgagagtgc ataccgcccc aacggcggtg agtgctacag ctgtgtgggc 450
 ctgagccggg aggcgtgccca gggtaacatcg ccgcccgtcg tgagctgcta 500
 caacgccagc gatcatgtct acaagggtcg cttecgacgc aacgtcacct 550
 tgacggcagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600
 gatgaattct gcaactcggga tggagtaaca ggcccagggt tcacgctcag 650
 tggctcctgt tgccagggggt ccgctgtaa ctctgacctc cgcaacaaga 700
 cctactttct cctcgaatc ccaccccttg tccggtgcgc cctccagag 750
 cccacgactg tggcctcaac cacatctgtc accactttta cctcggcccc 800
 agtgagaccc acatccacca ccaaacccat gccagcgcca accagtcaga 850
 ctccgagaca gggagtagaa caccgagcct cccgggatga ggagcccagg 900
 ttgactggag gcgcgcgtcg ccaccaggac cgcagcaatt cagggcagta 950
 tcctgcaaaa ggggggcccc agcagcccca taataaaggc tgtgtggctc 1000
 ccacagctgg attgacgacc cttctgttgg cgtggtgtgc tgggtgccta 1050
 ctgtgagctt ctccacctgg aaattttcct ctacacctact tctctgcccc 1100
 tgggtacccc tcttctcatc acttctctgt cccaccactg gactgggctg 1150
 gccacgcccc tgtttttcca acattcccca gtatcccag cttctgctgc 1200
 gctggtttgc ggctttggga aataaaatac cgttgtatat attctgccag 1250
 ggggtttcta gctttttgag gacagctcct gtatccttct catccttgc 1300
 tctccgcttg tctccttgat atgttaggac agagtgcagc aagtcagctg 1350
 tcacggggaa ggtgagagag aggatgctaa gcttctact cactttctcc 1400
 tagccagcct ggactttgga gcgtgggggt ggtgggacaa tggctcccca 1450
 ctctaagcac tgctccccc actcccgcga tctttgggga atcggttccc 1500
 catatgtott ccttactaga ctgtgagctc ctcgaggggg ggcccggtag 1550
 ccaattcgcc ctatagttag tctga 1575

<210> 197
 <211> 346
 <212> PRT
 <213> Homo sapiens

<400> 197
 Met Asp Pro Ala Arg Lys Ala Gly Ala Gln Ala Met Ile Trp Thr
 1 5 10 15
 Ala Gly Trp Leu Leu Leu Leu Leu Arg Gly Gly Ala Gln Ala
 20 25 30
 Leu Glu Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser

	35		40		45
Pro Asn Lys Met	Lys Thr Val Lys Cys Ala	Pro Gly Val Asp Val			
	50	55	60		
Cys Thr Glu Ala	Val Gly Ala Val Glu Thr	Ile His Gly Gln Phe			
	65	70	75		
Ser Leu Ala Val	Arg Gly Cys Gly Ser Gly	Leu Pro Gly Lys Asn			
	80	85	90		
Asp Arg Gly Leu	Asp Leu His Gly Leu	Leu Ala Phe Ile Gln Leu			
	95	100	105		
Gln Gln Cys Ala	Gln Asp Arg Cys Asn Ala	Lys Leu Asn Leu Thr			
	110	115	120		
Ser Arg Ala Leu	Asp Pro Ala Gly Asn Glu	Ser Ala Tyr Pro Pro			
	125	130	135		
Asn Gly Val Glu	Cys Tyr Ser Cys Val Gly	Leu Ser Arg Glu Ala			
	140	145	150		
Cys Gln Gly Thr	Ser Pro Pro Val Val Ser	Cys Tyr Asn Ala Ser			
	155	160	165		
Asp His Val Tyr	Lys Gly Cys Phe Asp Gly	Asn Val Thr Leu Thr			
	170	175	180		
Ala Ala Asn Val	Thr Val Ser Leu Pro Val	Arg Gly Cys Val Gln			
	185	190	195		
Asp Glu Phe Cys	Thr Arg Asp Gly Val Thr	Gly Pro Gly Phe Thr			
	200	205	210		
Leu Ser Gly Ser	Cys Cys Gln Gly Ser Arg	Cys Asn Ser Asp Leu			
	215	220	225		
Arg Asn Lys Thr	Tyr Phe Ser Pro Arg Ile	Pro Pro Leu Val Arg			
	230	235	240		
Leu Pro Pro Pro	Glu Pro Thr Thr Val Ala	Ser Thr Thr Ser Val			
	245	250	255		
Thr Thr Ser Thr	Ser Ala Pro Val Arg Pro	Thr Ser Thr Thr Lys			
	260	265	270		
Pro Met Pro Ala	Pro Thr Ser Gln Thr Pro	Arg Gln Gly Val Glu			
	275	280	285		
His Glu Ala Ser	Arg Asp Glu Glu Pro Arg	Leu Thr Gly Gly Ala			
	290	295	300		
Ala Gly His Gln	Asp Arg Ser Asn Ser Gly	Gln Tyr Pro Ala Lys			
	305	310	315		
Gly Gly Pro Gln	Gln Pro His Asn Lys Gly	Cys Val Ala Pro Thr			
	320	325	330		
Ala Gly Leu Ala	Ala Leu Leu Leu Ala Val	Ala Ala Gly Val Leu			
	335	340	345		

Leu

<210> 198
 <211> 1657
 <212> DNA
 <213> Homo sapiens

<400> 198
 cgggaactcgg cgggtctctcc tgggagtctc ggaggggacc ggcgtgtgcag 50
 acgccatgga gttggtgctg gtcttctctc gcagcctgct gggcccatg 100
 gtctctggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150
 tgattaccag accctgagga ttgggggact ggtgttgcgt gtggtcctct 200
 tetcggttgg gatcctcctt atcctaagtc gcaggtgcaa gtgcagtttc 250
 aatcagaagc cccgggcccc aggagatgag gaagcccagg tggagaacct 300
 catcacccgc aatgcaacag agccccagaa gcagagaact gaagtgcacg 350
 catcaggtag aagcctctgg aacctgaggc ggctgcttga acctttggat 400
 gcaaatgtcg atgcttaaga aaacgggcca cttcagcaac agccctttcc 450
 ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctetaaac 500
 cattctctca cctgatgatg caactaacac ttgcctcccc actgcagcct 550
 ggcgtcctgc ccacctcccg tgatgtgtgt gtgtgtgtgt gtgtgtgact 600
 gtgtgtgttt gctaactgtg gtctttgtgg ctacttggtt gtggatgcta 650
 ttgtgtttgt tagtgaactg tggactcgtt ttcccaggca ggggctgagc 700
 cacatggcca tetgctcttc cctgcccccg tggccttcca tcacctctg 750
 ctctaggag gtgcttctgt gcccgagacc agccccctcc cctgatttag 800
 ggatgcgtag ggtaagagca cgggcagtgg tcttcagtcg tcttgggacc 850
 tgggaaggtt tgcagcactt tgtcatcatt cttcatggac tcttttca 900
 cctttaacaa aaaccttgct tccttatccc acctgatccc agtctgaagg 950
 tctcttagca actggagata caaagcaagg agctggtgag ccagcgttg 1000
 acgtcaggca ggctatgccc ttccgtggtt aatttcttcc caggggcttc 1050
 cacgaggagt ccccatctgc cccgccccct cacagagcgc cgggggattc 1100
 caggccagg gcttctaact tgccccctgg gaatgtgtcc cctgcata 1150
 ttctcagcaa taactccatg ggctctggga ccctaccctc tccaaccttc 1200
 cctgcttctg agacttcaat ctacagccca gctcatccag atgcagacta 1250
 cagtcctctg aattgggtct ctggcaggca atagttgaag gactcctgtt 1300
 ccgttggggc cagcacaccg ggatggatgg agggagagca gaggcctttg 1350
 cttctctgcc tacgtccctc tagatgggca gcagaggcaa ctccgcctc 1400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met	Lys	Ile	Pro	Val	Leu	Pro	Ala	Val	Val	Leu	Leu	Ser	Leu	Leu
1				5					10					15
Val	Leu	His	Ser	Ala	Gln	Gly	Ala	Thr	Leu	Gly	Gly	Pro	Glu	Ala
			20					25						30
Glu	Ser	Thr	Ile	Glu	Asn	Tyr	Ala	Ser	Arg	Pro	Glu	Ala	Phe	Asn
			35					40						45
Thr	Pro	Phe	Leu	Asn	Ile	Asp	Lys	Leu	Arg	Ser	Ala	Phe	Lys	Ala
			50					55						60
Asp	Glu	Phe	Leu	Asn	Trp	His	Ala	Leu	Phe	Glu	Ser	Ile	Lys	Arg
			65					70						75
Lys	Leu	Pro	Phe	Leu	Asn	Trp	Asp	Ala	Phe	Pro	Lys	Leu	Lys	Glu
			80					85						90
Leu	Arg	Ser	Ala	Thr	Pro	Asp	Ala	Gln						
				95										

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50
ggtggagatt gcctttgcct cagtgttctt cacctgcctc tccctttctgg 100
cagcaggagt ctcccagggt gttcttctcc agccagttcc aactcaggag 150
acaggtccca aggccatggg agatctctcc tgtggctttg cggccaactc 200
atgagagtgt ttttgtgtaa agtatTTTTT agaatactgt tgacttcttc 250
atgatttaat aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300
tcaaccctca aatttttTgt atactagatg gcttcattt acccaccact 350
attttaaggt ccttttattt ttagggtcaa ggttcatttg acttgagaaa 400
gtgcccttct gcagcttcoat tgattttTgt tatcttcact attaattgta 450
acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500
cctgggtgcc cctgacacat ttatgtatg atccccaaa tgtgattgtt 550
aatttaaagt ttatttctaatt attagtacat tcagttgtga tgtaatatga 600
ataaccagaa tctatttctt aaaagttttg agtatatttt tcaactagat 650
atttgtatag aaagactgaa tagtgatg 678

<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu
 1 5 10 15
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro
 20 25 30
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
 35 40 45
 Cys Gly Phe Ala Gly His Ser
 50

<210> 204
 <211> 1917
 <212> DNA
 <213> Homo sapiens

<400> 204
 ggggaatctg cagtaggtct gccggcgatg gagtgggtgg ctagctcgcc 50
 gcttcggctc tggctgctgt tgttcctcct gccctcagcg caggggccgcc 100
 agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150
 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200
 tgggtgcata gaagaggatc taactccttt ccgaggagcg atctccagga 250
 agatgatggc agaggtagtc agacggaagc tagggacca ctatcagatc 300
 actaagaaca gactgtaccg ggaaaatgac tgcattgtcc cctcaagggtg 350
 tagtgggtgt gagcacttta ttttgggaagt gatcgggctg ctccctgaca 400
 tggagatggt gatcaatgta cgagattatc ctccaggttc taaatggatg 450
 gagcctgccca tcccagtcct ctccctcagt aagacatcag agtaccatga 500
 tatcatgtat cctgcttgga cattttggga agggggacot gctgtttggc 550
 caatttatcc tacaggtcct ggacgggtgg acctcttcag agaagatctg 600
 gtaagggtcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650
 tttccgagga tcaaggacaa gtccagaacg agatcctctc attcttctgt 700
 ctcggaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750
 tggaaatcta tgaagatac cttaggaaag ccagctgcta aggatgtcca 800
 tcttgggat cactgcaaat acaagtatct gttaattttt cgaggcgtag 850
 ctgcaagttt ccggtttaa cacctcttcc tgggtggctc actgttttcc 900
 catgttggtg atgagtggtc agaattcttc tatccacagc tgaagccatg 950
 ggttcactat atcccagtc aaacagatct ctccaatgct caagagctgt 1000

tacaatttgt aaaagcaaat gatgatgtag ctcaagagat tgctgaaagg 1050
 ggaagccagt ttattaggaa ccatttgcag atggatgaca tcacctgtta 1100
 ctgggagaac ctcttgagtg aatactctaa attcctgtct tataatgtaa 1150
 cgagaaggaa aggttatgat caaattattc ccaaaatgtt gaaaactgaa 1200
 ctatagtagt catcatagga ccatagtcct ctttgtggca acagatctca 1250
 gatatcctac ggtgagaagc ttaccataag cttggtcctc ataccttgaa 1300
 tatctgctat caagccaaat acctggtttt ccttatcatg ctgcaccag 1350
 agcaactcct gagaaagatt taaaatgtgt ctaatacact gatatgaagc 1400
 agttcaactt tttggatgaa taaggaccag aaatcgtgag atgtggattt 1450
 tgaacccaac tctacctttc attttcttaa gaccaatcac agcttgtgcc 1500
 tcagatcatc cacctgtgtg agtccatcac tgtgaaattg actgtgtcca 1550
 tgtgatgatg ccccttgtcc cattatttgg agcagaaaaa tcgtcatttg 1600
 gaagtagtac aactcattgc tggaattgtg aaattattca aggcgtgac 1650
 tctgtcactt tattttaatg taggaaaccc tatgggggtt atgaaaaata 1700
 cttggggatc attctctgaa tgggtctaagg aagcggtagc catgccatgc 1750
 aatgatgtag gagttctott ttgtaaaacc ataaactctg ttactcagga 1800
 ggtttctata atggcacata gaaagaggcc aattgcata gtaattattg 1850
 caattggatt tcaggttccc ttttgtgcc ttcatgcctc acttctta 1900
 gcctctctaa agccaaa 1917

<210> 205
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 205
 Met Glu Trp Trp Ala Ser Ser Pro Leu Arg Leu Trp Leu Leu Leu
 1 5 10 15
 Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser
 20 25 30
 Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn
 35 40 45
 Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val
 50 55 60
 Ile Glu Glu Asp Phe Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys
 65 70 75
 Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln
 80 85 90
 Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro

[illegible]

<210> 206

<211> 1425
 <212> DNA
 <213> Homo sapiens

<400> 206
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 ccctcgctc ttctatcctg gcctttggca ccggagtggg gttcgtgcgc 100
 tttaacctcc ttcgccact tcttgagggg atcccgaggt ctgggtggtcc 150
 ggatgccgc cagggatggc tggctgccct gcaggacgcg agcatccttg 200
 cccccctggc atgggatctg gggctcctgc ttctatttgt tgggcagcac 250
 agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtacttttg 300
 ggtccttcag aggtcactgt atgtggcctg cactgccctg gccttgccgc 350
 tggtgatgcg gtaactgggag ccataccca aaggccctgt gttgtgggag 400
 gctcgggctg agccatgggc cacctgggtg ccgctcctct gctttgtgct 450
 ccattgcac tcctggctcc tcatctttag catccttctc gtctttgaact 500
 atgctgagct catgggctc aaacagggtat actaccatgt gctggggctg 550
 ggcgagctc tggccctgaa gtctcccggt gctctcagac tctctccca 600
 cctgcgcac ccagtgtgtg tggagctgct gacagtgtg tgggtgggtg 650
 ctaccctggg cagggacgt ctctccttg ctttctcct taacctctac 700
 ctgggcctgg ctacgggct tgatagcaa gacctcgcct acctccggg 750
 ccagctaca agaaaaactc acctgctctc tcggcccgag gatggggagg 800
 cagagtgagg agctcactct ggttacaagc cctgttctc ctctccact 850
 gaattctaaa tccttaaat ccaggcctg gctgcttcat gccagaggcc 900
 caaatcatg gactgaagga gatgccctt ctactacttg agactttatt 950
 ctctgggtcc agctccatac cctaaattct gatttccagc cactgaactc 1000
 caaggtccac ttctcaccag caaggaagag tgggggtatg aagtcatctg 1050
 tcccttcaact gtttagagca tgacactctc cccctcaaca gctcctcag 1100
 aaggaagga tctgccctga ccactccctt ggcactgta cttgcctctg 1150
 cgcctcaggg gtccctctt gcaccgctgg ctccactcc aagaagggtg 1200
 accagggtct gcaagttcaa cggctatagc tgcctccca ggcaccaacc 1250
 ttgcctcacc actccgggcc ctagtctctg cactcctta ggcctgcct 1300
 ctgggctcag accccaacct agtcaagggt attctcctgc tcttaactgc 1350
 atgacttggg gtcctctgct ctcccgagga agatgctctg caggaaaata 1400
 aaagtcagcc tttttctaaa aaaaa 1425

<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207

Met	Ala	Pro	Ala	Leu	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe	
1				5					10					15	
Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser	
				20					25					30	
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp	
				35					40					45	
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu	
				50					55					60	
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Phe	Val	Gly		
				65					70					75	
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser	
				80					85					90	
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr	
				95					100					105	
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro	
				110					115					120	
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr	
				125					130					135	
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu	
				140					145					150	
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu	Met	
				155					160					165	
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro	
				170					175					180	
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu	
				185					190					195	
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val	
				200					205					210	
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr	
				215					220					225	
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg	
				230					235					240	
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg	
				245					250					255	
Pro	Gln	Asp	Gly	Glu	Ala	Glu									
				260											

<210> 208
 <211> 2095
 <212> DNA

<213> Homo sapiens

<400> 208

ccgagcacag gagattgcct gcgttttaga ggtggctgcg ttgtgggaaa 50
agctatcaag gaagaaattg ccaaaccatg tcttttttcc tgttttcaga 100
gtagtccaca acagatctga gtgttttaat taagcatgga atacagaaaa 150
caacaaaaaa cttaagcttt aatttcattc ggaattccac agttttctta 200
gtcccttgga cccggttgac ctggttgctc tccccgctgg ctgctctatc 250
acgtggtgct ctcogactac tcaccccgag tgtaaagaac cttcggtctg 300
cgtgctctct agctgctgtg gatggcctcg gctctctgga ctgtccttcc 350
gagtaggatg tcactgagat cctccaaatg gagcctcctg ctgctgtcac 400
tctgagttt ctttgtgatg tggtaacctc gccttcccca ctacaatgtg 450
atagaacgag tgaactggat gtacttctat gagtatgagc cgatttacag 500
acaagacttt cacttcacac ttcgagagca ttcaaaactgc tctcatcaaa 550
atccatttct ggtcattctg gtgacctccc acccttcaga tgtgaaagcc 600
aggcaggcca ttagagttac ttggggtgaa aaaaagtctt ggtggggata 650
tgaggttctt acatttttct tattaggcca agaggctgaa aagggaagaca 700
aaatgttggc attgtcctta gaggatgaac acctcttcta tggtgacata 750
atccgacaag attttttaga cacatataat aacctgacct tgaaaacct 800
tatggcattc aggtgggtaa ctgagttttg ccccaatgcc aagtacgtaa 850
tgaagacaga cactgatgtt ttcataata ctggcaattt agtgaagtat 900
cttttaaacc taaaccactc agagaagttt ttcacagggt atcctctaata 950
tgataattat tctatagag gattttacca aaaaacctat atttcttacc 1000
aggagtatcc tttcaagggt ttccctccat actgcagtgg gttgggttat 1050
ataatgtoca gagatttggg gccaaagatc tatgaaatga tgggtcacgt 1100
aaaaccatc aagtttgaag atgtttatgt cgggactctg ttgaatttat 1150
taaaagtga cttcatatt ccagaagaca caaatctttt ctttctatat 1200
agaatccatt tggatgtctg tcaactgaga cgtgtgatg cagcccatgg 1250
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ccacatgcca ttattaactt cacattctac aaaaagccta gaaggacagg 1350
atacctgtg gaaagtgtta aataaagtag gtactgtgga aaattcatgg 1400
ggaggtcagt gtgctggctt aactggaact gaaactcatg aaaaaccag 1450
actggagact ggagggttac acttgtgatt tattagtcat gcccttcaaa 1500

gatgatatgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550
 gaaattaata ggaccaaaca atttggacat gtcattctgt agactagaat 1600
 ttcttaaaag ggtgttactg agttataagc tcactaggct gtaaaaacaa 1650
 aacaatgtag agtttttatt attgaacaat gtagtcactt gaaggttttg 1700
 tgtatatott atgtggatta ccaatttaaa aatatatgta gttctgtgtc 1750
 aaaaaacttc ttactgaag ttatactgaa caaaatttta cctgtttttg 1800
 gtcatttata aagtacttca agatgttgca gtatttcaca gttattatta 1850
 tttaaaatta cttcaacttt gtgtttttaa atgttttgac gatttcaata 1900
 caagataaaa aggtagtga atcattcttt acatgcaaac attttccagt 1950
 tacttaactg atcagtttat tattgataca tcactccatt aatgtaaagt 2000
 cataggtcat tattgcatat cagtaatctc ttggactttg tttaatatatt 2050
 tactgtggtg atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209

<211> 331

<212> PRT

<213> Homo sapiens

<400> 209

Met	Ala	Ser	Ala	Leu	Trp	Thr	Val	Leu	Pro	Ser	Arg	Met	Ser	Leu
1				5					10					15
Arg	Ser	Leu	Lys	Trp	Ser	Leu	Leu	Leu	Leu	Ser	Leu	Leu	Ser	Phe
			20						25					30
Phe	Val	Met	Trp	Tyr	Leu	Ser	Leu	Pro	His	Tyr	Asn	Val	Ile	Glu
			35						40					45
Arg	Val	Asn	Trp	Met	Tyr	Phe	Tyr	Glu	Tyr	Glu	Pro	Ile	Tyr	Arg
			50						55					60
Gln	Asp	Phe	His	Phe	Thr	Leu	Arg	Glu	His	Ser	Asn	Cys	Ser	His
			65						70					75
Gln	Asn	Pro	Phe	Leu	Val	Ile	Leu	Val	Thr	Ser	His	Pro	Ser	Asp
			80						85					90
Val	Lys	Ala	Arg	Gln	Ala	Ile	Arg	Val	Thr	Trp	Gly	Glu	Lys	Lys
			95						100					105
Ser	Trp	Trp	Gly	Tyr	Glu	Val	Leu	Thr	Phe	Phe	Leu	Leu	Gly	Gln
			110						115					120
Glu	Ala	Glu	Lys	Glu	Asp	Lys	Met	Leu	Ala	Leu	Ser	Leu	Glu	Asp
			125						130					135
Glu	His	Leu	Leu	Tyr	Gly	Asp	Ile	Ile	Arg	Gln	Asp	Phe	Leu	Asp
			140						145					150
Thr	Tyr	Asn	Asn	Leu	Thr	Leu	Lys	Thr	Ile	Met	Ala	Phe	Arg	Trp
			155						160					165

Val Thr Glu Phe Cys Pro Asn Ala Lys Tyr Val Met Lys Thr Asp
170 175 180

Thr Asp Val Phe Ile Asn Thr Gly Asn Leu Val Lys Tyr Leu Leu
185 190 195

Asn Leu Asn His Ser Glu Lys Phe Phe Thr Gly Tyr Pro Leu Ile
200 205 210

Asp Asn Tyr Ser Tyr Arg Gly Phe Tyr Gln Lys Thr His Ile Ser
215 220 225

Tyr Gln Glu Tyr Pro Phe Lys Val Phe Pro Pro Tyr Cys Ser Gly
230 235 240

Leu Gly Tyr Ile Met Ser Arg Asp Leu Val Pro Arg Ile Tyr Glu
245 250 255

Met Met Gly His Val Lys Pro Ile Lys Phe Glu Asp Val Tyr Val
260 265 270

Gly Ile Cys Leu Asn Leu Leu Lys Val Asn Ile His Ile Pro Glu
275 280 285

Asp Thr Asn Leu Phe Phe Leu Tyr Arg Ile His Leu Asp Val Cys
290 295 300

Gln Leu Arg Arg Val Ile Ala Ala His Gly Phe Ser Ser Lys Glu
305 310 315

Ile Ile Thr Phe Trp Gln Val Met Leu Arg Asn Thr Thr Cys His
320 325 330

Tyr

<210> 210
<211> 745
<212> DNA
<213> Homo sapiens

<400> 210
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caacgtcaat gatgacaaca acaatgctgg aagtgggcag cagtcagtga 150
gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200
gactcctgga attccatctg ggattatgga aatggccttg ctgcaaccag 250
actctttcaa aagaagacat gcattgtgca caaaatgaac aagggaagtoa 300
tgccctccat tcaatccctt gatgcactgg tcaaggaaaa gaagcttcag 350
ggtaaggggac caggaggacc acctcccaag ggctgatgt actcagtcaa 400
cccaacaaaa gtcgatgacc tgagcaagtt cggaataaac attgcaaaca 450
tgtgtcgtgg gattccaaca tacatggctg aggagatgca agaggcaagc 500
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ggacattttcc ttctgtggag acacggtgga gaactaaaca attttttaaa 600
gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650
tccagtgtgt tttaccatgt cattctgaaa tttttctcta ctagttagtg 700
ttgatttctt taagtttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211
<211> 185
<212> PRT
<213> Homo sapiens

<400> 211
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Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn
20 25 30
Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu
35 40 45
His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp
50 55 60
Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu
65 70 75
Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val
80 85 90
Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys
95 100 105
Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Lys Gly Leu Met
110 115 120
Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly
125 130 135
Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala
140 145 150
Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys
155 160 165
Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly
170 175 180
Asp Thr Val Glu Asn
185

<210> 212
<211> 1706
<212> DNA
<213> Homo sapiens

<400> 212
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 ataaagtaga ttgagtctcc aattttatgt aagcttcaga agaactgggt 300
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 gacagtcttc gaaccaatgt gtttggtcga tttcaaccag agactatagc 400
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aaaagt 1706

<210> 213
<211> 299
<212> PRT
<213> Homo sapiens

<400> 213
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Gln Ile Pro Leu Pro Thr Arg Pro His Trp Phe Leu Leu Phe Gly
35 40 45
Thr Thr Glu Glu Glu Ile Gln Glu Ile Cys Ile Glu Thr Leu Arg
50 55 60
Leu Tyr Thr Arg Lys Lys Pro Asn Tyr Glu Leu Leu Glu Lys Glu
65 70 75
Val Glu Lys Arg Lys Val Ala Leu Gln Glu Ala Lys Leu Lys Ala
80 85 90
Lys Gly Leu Asn Pro Asp Gly Thr Pro Ala Leu Ser Thr Leu Gly
95 100 105
Gly Phe Ser Pro Ala Ser Lys Pro Ser Ser Pro Arg Glu Val Lys
110 115 120
Ala Glu Glu Lys Ser Pro Ile Ser Ile Asn Val Lys Thr Val Lys
125 130 135
Lys Glu Pro Glu Asp Arg Gln Gln Ala Ser Lys Ser Pro Tyr Asn
140 145 150
Gly Val Arg Lys Asp Ser Lys Arg Ser Arg Asn Ser Arg Ser Ala
155 160 165
Ser Arg Ser Arg Ser Arg Thr Arg Ser Arg Ser Arg Ser His Thr
170 175 180
Pro Arg Arg His Tyr Asn Asn Arg Arg Ser Arg Ser Gly Thr Tyr
185 190 195
Ser Ser Arg Ser Arg Ser Arg Ser Arg Ser His Ser Glu Ser Pro
200 205 210
Arg Arg His His Asn His Gly Ser Pro His Leu Lys Ala Lys His
215 220 225
Thr Arg Asp Asp Leu Lys Ser Ser Asn Arg His Gly His Lys Arg
230 235 240
Lys Lys Ser Arg Ser Arg Ser Gln Ser Lys Ser Arg Asp His Ser
245 250 255
Asp Ala Ala Lys Lys His Arg His Glu Arg Gly His His Arg Asp
260 265 270
Arg Arg Glu Arg Ser Arg Ser Phe Glu Arg Ser His Lys Ser Lys

His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg
290 295

<210> 214
<211> 730
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663
<223> unknown base

<400> 214
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ggattgtaat atgaaattat ttaaaagggc ttcgctcata tataggaaaa 200
tcgcatatgg tcctagtatt aaattnttat tgcttactga tttttttgag 250
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agaaaaaaga ataaagtaga ttgagtcctc aattttatgt aagcttcaaga 350
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agccaaacta tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc 650
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agccctttca accctgggtg gattttctcc 730

<210> 215
<211> 1807
<212> DNA
<213> Homo sapiens

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ctctgtaacg gcagtttgtt cagatacaag caccggtctg aggaggagct 200
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tttttaa 1807

<210> 216

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<210> 218
 <211> 2571
 <212> DNA
 <213> Homo sapiens

<400> 218
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 ggctggtttg ggccttctga gctgacagaa ggtggccagg gagaatgcag 200
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<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

Met Lys Ala Leu Leu Leu Leu Val Leu Pro Trp Leu Ser Pro Ala

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	20	25	
Leu Cys Lys Gly	Ala Ser His Tyr Gly	Leu Thr Lys Asp Arg	Lys 45
	35	40	
Arg Arg Ser Gln	Asp Gly Cys Pro Asp	Gly Cys Ala Ser Leu Thr	60
	50	55	
Ala Thr Ala Pro	Ser Pro Glu Val Ser	Ala Ala Thr Ile Ser	75
	65	70	
Leu Met Thr Asp	Glu Pro Gly Leu Asp	Asn Pro Ala Tyr Val Ser	90
	80	85	
Ser Ala Glu Asp	Gly Gln Pro Ala Ile	Ser Pro Val Asp Ser	Gly 105
	95	100	
Arg Ser Asn Arg	Thr Arg Ala Arg Pro	Phe Glu Arg Ser Thr	Ile 120
	110	115	
Arg Ser Arg Ser	Phe Lys Lys Ile Asn	Arg Ala Leu Ser Val	Leu 135
	125	130	
Arg Arg Thr Lys	Ser Gly Ser Ala Val	Ala Asn His Ala Asp	Gln 150
	140	145	
Gly Arg Glu Asn	Ser Glu Asn Thr Thr	Ala Pro Glu Val Phe	Pro 165
	155	160	
Arg Leu Tyr His	Leu Ile Pro Asp Gly	Glu Ile Thr Ser Ile	Lys 180
	170	175	
Ile Asn Arg Val	Asp Pro Ser Glu Ser	Leu Ser Ile Arg Leu	Val 195
	185	190	
Gly Gly Ser Glu	Thr Pro Leu Val His	Ile Ile Ile Gln His	Ile 210
	200	205	
Tyr Arg Asp Gly	Val Ile Ala Arg Asp	Gly Arg Leu Leu Pro	Gly 225
	215	220	
Asp Ile Ile Leu	Lys Val Asn Gly Met	Asp Ile Ser Asn Val	Pro 240
	230	235	
His Asn Tyr Ala	Val Arg Leu Leu Arg	Gln Pro Cys Gln Val	Leu 255
	245	250	
Trp Leu Thr Val	Met Arg Glu Gln Lys	Phe Arg Ser Arg Asn	Asn 270
	260	265	
Gly Gln Ala Pro	Asp Ala Tyr Arg Pro	Arg Asp Asp Ser Phe	His 285
	275	280	
Val Ile Leu Asn	Lys Ser Ser Pro Glu	Glu Gln Leu Gly Ile	Lys 300
	290	295	
Leu Val Arg Lys	Val Asp Glu Pro Gly	Val Phe Ile Phe Asn	Val 315
	305	310	
Leu Asp Gly Gly	Val Ala Tyr Arg His	Gly Gln Leu Glu Glu	Asn

	320		325		330
Asp Arg Val Leu	Ala Ile Asn Gly His	Asp Leu Arg Tyr Gly Ser			
	335	340			345
Pro Glu Ser Ala	Ala His Leu Ile Gln	Ala Ser Glu Arg Arg Val			
	350	355			360
His Leu Val Val	Ser Arg Gln Val Arg	Gln Arg Ser Pro Asp Ile			
	365	370			375
Phe Gln Glu Ala	Gly Trp Asn Ser Asn	Gly Ser Trp Ser Pro Gly			
	380	385			390
Pro Gly Glu Arg	Ser Asn Thr Pro Lys	Pro Leu His Pro Thr Ile			
	395	400			405
Thr Cys His Glu	Lys Val Val Asn Ile	Gln Lys Asp Pro Gly Glu			
	410	415			420
Ser Leu Gly Met	Thr Val Ala Gly Gly	Ala Ser His Arg Glu Trp			
	425	430			435
Asp Leu Pro Ile	Tyr Val Ile Ser Val	Glu Pro Gly Gly Val Ile			
	440	445			450
Ser Arg Asp Gly	Arg Ile Lys Thr Gly	Asp Ile Leu Leu Asn Val			
	455	460			465
Asp Gly Val Glu	Leu Thr Glu Val Ser	Arg Ser Glu Ala Val Ala			
	470	475			480
Leu Leu Lys Arg	Thr Ser Ser Ser Ile	Val Leu Lys Ala Leu Glu			
	485	490			495
Val Lys Glu Tyr	Glu Pro Gln Glu Asp	Cys Ser Ser Pro Ala Ala			
	500	505			510
Leu Asp Ser Asn	His Asn Met Ala Pro	Pro Ser Asp Trp Ser Pro			
	515	520			525
Ser Trp Val Met	Trp Leu Glu Leu Pro	Arg Cys Leu Tyr Asn Cys			
	530	535			540
Lys Asp Ile Val	Leu Arg Arg Asn Thr	Ala Gly Ser Leu Gly Phe			
	545	550			555
Cys Ile Val Gly	Gly Tyr Glu Glu Tyr	Asn Gly Asn Lys Pro Phe			
	560	565			570
Phe Ile Lys Ser	Ile Val Glu Gly Thr	Pro Ala Tyr Asn Asp Gly			
	575	580			585
Arg Ile Arg Cys	Gly Asp Ile Leu Leu	Ala Val Asn Gly Arg Ser			
	590	595			600
Thr Ser Gly Met	Ile His Ala Cys Leu	Ala Arg Leu Leu Lys Glu			
	605	610			615
Leu Lys Gly Arg	Ile Thr Leu Thr Ile	Val Ser Trp Pro Gly Thr			
	620	625			630
Phe Leu					

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220
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 gtttttaaca toatcagccc aagcaacaat ggtggcaatg ttcaggagac 200
 agtgacaatt gataatgaaa aaaataccgc catcgtaa acatcatgac 250
 gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300
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 aaaatataaa tgctgtattt ata 773

<210> 221
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 221
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 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu
 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
 80 85 90

Ile	Pro	Pro	Leu	Asn	Asn	Leu	Gln	Trp	Tyr	Ile	Tyr	Glu	Lys	Gln
				95					100					105
Ala	Leu	Asp	Asn	Met	Phe	Ser	Asn	Lys	Tyr	Thr	Trp	Val	Lys	Tyr
				110					115					120
Asn	Pro	Leu	Glu	Ser	Leu	Ile	Lys	Asp	Val	Asp	Trp	Phe	Leu	Leu
				125					130					135
Gly	Ser	Pro	Ile	Glu	Lys	Leu	Cys	Lys	His	Ile	Pro	Leu	Tyr	Lys
				140					145					150
Gly	Glu	Val	Val	Glu	Asn	Thr	His	Asn	Val	Gly	Ala	Gly	Gly	Cys
				155					160					165
Ala	Lys	Ala	Gly	Leu	Leu	Gly	Ile	Leu	Gly	Ile	Ser	Ile	Cys	Ala
				170					175					180

Asp Ile His Val

<210> 222
 <211> 992
 <212> DNA
 <213> Homo sapiens

<400> 222
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 tgccagcagc ttctcoaagg caccggagga agaaattacc cctgtgtgtc 150
 ccattgccta caaagtctct gaagtcttcc ccaaggccgc ctgggtgtct 200
 ataacctgct gtgcacccca gccaccaccg cccatcacct attccctctg 250
 tggaaaccaag aacatcaagg tggccaagaa ggtggtgaag acccagcagc 300
 cggcctctct caacctcaac gtcacactca agtccagtc agacctgtct 350
 acctacttct gcggggcgct ctccacctca ggtgccatg tggacagtgc 400
 cagggtacag atgcactggg agctgtggtc caagccagt tctgagctgc 450
 gggccaactt cactctgcag gacagagggg caggcccccag ggtggagatg 500
 atctgccagg cgtctctggg cagccacact atcaccaaca gcctgatcgg 550
 gaaggatggg cagggtccacc tgcagcagag accatgccac aggcagcctg 600
 ccaacttctc ctctctgccg agccagacat cggactggtt ctgggtgccag 650
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 aggtggtgac cagaagatgg aggactggca ggggtccctg gagagcccca 750
 tccttgccct gcgcgtctac agggagcccc gccgtctgag tgaagaggag 800
 ttgtgggggt tcaggatagg gaatggggag gtcagaggac gcaaagcagc 850
 agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactgtt cgtatttggga gttcatgcaa aatgagtgtg 950

ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met Gly Leu Pro Gly Leu Phe Cys Leu Ala Val Leu Ala Ala Ser
1 5 10 15

Ser Phe Ser Lys Ala Arg Glu Glu Glu Ile Thr Pro Val Val Ser
20 25 30

Ile Ala Tyr Lys Val Leu Glu Val Phe Pro Lys Gly Arg Trp Val
35 40 45

Leu Ile Thr Cys Cys Ala Pro Gln Pro Pro Pro Ile Thr Tyr
50 55 60

Ser Leu Cys Gly Thr Lys Asn Ile Lys Val Ala Lys Lys Val Val
65 70 75

Lys Thr His Glu Pro Ala Ser Phe Asn Leu Asn Val Thr Leu Lys
80 85 90

Ser Ser Pro Asp Leu Leu Thr Tyr Phe Cys Arg Ala Ser Ser Thr
95 100 105

Ser Gly Ala His Val Asp Ser Ala Arg Leu Gln Met His Trp Glu
110 115 120

Leu Trp Ser Lys Pro Val Ser Glu Leu Arg Ala Asn Phe Thr Leu
125 130 135

Gln Asp Arg Gly Ala Gly Pro Arg Val Glu Met Ile Cys Gln Ala
140 145 150

Ser Ser Gly Ser Pro Pro Ile Thr Asn Ser Leu Ile Gly Lys Asp
155 160 165

Gly Gln Val His Leu Gln Gln Arg Pro Cys His Arg Gln Pro Ala
170 175 180

Asn Phe Ser Phe Leu Pro Ser Gln Thr Ser Asp Trp Phe Trp Cys
185 190 195

Gln Ala Ala Asn Asn Ala Asn Val Gln His Ser Ala Leu Thr Val
200 205 210

Val Pro Pro Gly Gly Asp Gln Lys Met Glu Asp Trp Gln Gly Pro
215 220 225

Leu Glu Ser Pro Ile Leu Ala Leu Pro Leu Tyr Arg Ser Thr Arg
230 235 240

Arg Leu Ser Glu Glu Glu Phe Gly Gly Phe Arg Ile Gly Asn Gly
245 250 255

Glu Val Arg Gly Arg Lys Ala Ala Ala Met
260 265

<210> 224
 <211> 1297
 <212> DNA
 <213> Homo sapiens

<400> 224
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 cttctgtctcc tgctgtccgg ctgggtccgg gctgggcgag ccgaccctca 100
 ctctctttgc tatgacatca ccgtcatccc taagttcaga cctggaccac 150
 ggtggtgtgc ggttcaaggc caggtggatg aaaagacttt tcttactat 200
 gactgtggca acaagacagt cacacctgtc agtcccctgg ggaagaaact 250
 aaatgtcaca acggcctgga aagcacagaa ccagtagtct agagaggttg 300
 tggacatact tacagagcaa ctgcgtgaca ttcagctgga gaattacaca 350
 cccaaggaac cctcacccct gcaggcaagg atgtcttgtg agcagaaagc 400
 tgaaggacac agcagtggat ctggcagtt cagtttcgat ggcagatct 450
 tcctcctctt tgactcagag aagagaatgt ggacaacggt tcactctgga 500
 gccagaaaga tgaagaaaaa gtggggagaat gacaagggtg tggccatgtc 550
 ctccattac ttctcaatgg gagactgtat aggatggctt gaggaattct 600
 tgatgggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650
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 agcacggtct tgatcaaat cgcccttctg tctggccagc tgcccacgac 850
 ctacggtgta tgtccagtgg cctccagcag atcatgatga catcatggac 900
 ccaatagctc attcactgcc ttgattcctt ttgccaaaca tttaccagc 950
 agttatacct aacatattat gcaattttct cttggtgcta cctgatggaa 1000
 ttctgcact taaagtctct gctgactaaa caagatatat cattttcttt 1050
 cttctctttt tgtttggaaa atcaagtact tctttgaatg atgatctctt 1100
 tcttgcaaat gatattgtca gtaaaataat caggttagac ttcagaccct 1150
 tggggattct ttccgtgtcc tgaaagagaa tttttaaatt atttaataag 1200
 aaaaaattta tattaatgat tgtttccttt agtaatttat tgttctgtac 1250
 tgatatattaa ataaagagtt ctatttccca aaaaaaaaaa aaaaaa 1297

<210> 225
 <211> 246
 <212> PRT
 <213> Homo sapiens

<400> 225

Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu
 1 5 10 15
 Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro
 20 25 30
 His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro
 35 40 45
 Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr
 50 55 60
 Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser
 65 70 75
 Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln
 80 85 90
 Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu
 95 100 105
 Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr
 110 115 120
 Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser
 125 130 135
 Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu
 140 145 150
 Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala
 155 160 165
 Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met
 170 175 180
 Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu
 185 190 195
 Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly
 200 205 210
 Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
 215 220 225
 Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
 230 235 240
 Phe Ile Leu Pro Gly Ile
 245

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

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 caagttatat accgtggaat ggagttgata ccaaccataa catcgtggag 150

tgccatcctg ctcccggtcg tctacctcac ggcgcaagtg tggattctgt 150
 gtgcagccat cgtgctgcc gectcagccg ggcceccagaa ctgcccctcc 200
 gtttgcctgt gcagtaacca gttcagcaag gtggtgtgca cgcgcggggg 250
 cctctccgag gtcccgagcgt gtattccttc gaacaccocgg tacctcaacc 300
 tcatggagaa caacatccag atgatccagg ccgacacott ccgccacctc 350
 caccacctgg aggtcctgca gttgggcagg aactccatcc ggcagattga 400
 ggtggggggc ttcaacgggc tggccagcct caacaccctg gagctgttcg 450
 acaactggct gacagtcato cctagcgggg cctttgaata cctgtccaag 500
 ctgccccgag tctggcttcg caacaacccc atcgaaagca tcccctctta 550
 cgccttcaac cgggtgccct cctcatgctg cctggacttg ggggagctca 600
 agaagctgga gtatatctct gagggagctt ttgaggggct gttaaacctc 650
 aagtatctga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700
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 agatcaggcc tggctccttc catggcctga gctccctcaa gaagctctgg 800
 gtcatgaact cacaggtcag cctgattgag cggaatgctt ttgacgggct 850
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 cccatgaact ctttaccocg ctgaggtacc tgggtggagt gcatctaac 950
 cacaaccctt ggaactgtga ttgtgacatt ctgtgctag cctggtggct 1000
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 cagtgtcttg ccccttctat catggacgca cctcgagacc tcaacatttc 1150
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 tgaagtgggt gctgcccaat gggacagtgc tcagccacgc ctcccgcacc 1250
 ccaaggatct ctgtcctcaa cgaaggcacc ttgaactttt cccacgtgct 1300
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 cagcaacacg agtcccgctc ggtgtatcag gtgagggggc agtagtgctg 1850
 cccacaattc atgaccatat taactacaac acctacaaac cagcacatgg 1900
 ggcccactgg acagaaaaca gcctggggaa ctctctgcac cccacagtca 1950
 ccactatctc tgaaccttat ataattcaga cccataccaa ggacaaggta 2000
 caggaaactc aaatatgact cccctccccc aaaaaactta taaatgcaa 2050
 tagaatgcac acaaagacag caacttttgt acagagtggg gagagacttt 2100
 ttctgtgata tgcttatata ttaagtctat gggctgggta aaaaaaacag 2150
 attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229
 <211> 653
 <212> PRT
 <213> Homo sapiens

<400> 229
 Met Lys Leu Leu Trp Gln Val Thr Val His His His Thr Trp Asn
 1 5 10 15
 Ala Ile Leu Leu Pro Phe Val Tyr Leu Thr Ala Gln Val Trp Ile
 20 25 30
 Leu Cys Ala Ala Ile Ala Ala Ala Ala Ser Ala Gly Pro Gln Asn
 35 40 45
 Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val Val
 50 55 60
 Cys Thr Arg Arg Gly Leu Ser Glu Val Pro Gln Gly Ile Pro Ser
 65 70 75
 Asn Thr Arg Tyr Leu Asn Leu Met Glu Asn Asn Ile Gln Met Ile
 80 85 90
 Gln Ala Asp Thr Phe Arg His Leu His His Leu Glu Val Leu Gln
 95 100 105
 Leu Gly Arg Asn Ser Ile Arg Gln Ile Glu Val Gly Ala Phe Asn
 110 115 120
 Gly Leu Ala Ser Leu Asn Thr Leu Glu Leu Phe Asp Asn Trp Leu
 125 130 135
 Thr Val Ile Pro Ser Gly Ala Phe Glu Tyr Leu Ser Lys Leu Arg
 140 145 150
 Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser Tyr
 155 160 165
 Ala Phe Asn Arg Val Pro Ser Leu Met Arg Leu Asp Leu Gly Glu
 170 175 180
 Leu Lys Lys Leu Glu Tyr Ile Ser Glu Gly Ala Phe Glu Gly Leu

	185		190		195
Phe Asn Leu Lys	Tyr Leu Asn Leu Gly	Met Cys Asn Ile Lys	Asp		
	200		205		210
Met Pro Asn Leu	Thr Pro Leu Val Gly	Leu Glu Glu Leu Glu	Met		
	215		220		225
Ser Gly Asn His	Phe Pro Glu Ile Arg	Pro Gly Ser Phe His	Gly		
	230		235		240
Leu Ser Ser Leu	Lys Lys Leu Trp Val	Met Asn Ser Gln Val	Ser		
	245		250		255
Leu Ile Glu Arg	Asn Ala Phe Asp Gly	Leu Ala Ser Leu Val	Glu		
	260		265		270
Leu Asn Leu Ala	His Asn Asn Leu Ser	Ser Leu Pro His Asp	Leu		
	275		280		285
Phe Thr Pro Leu	Arg Tyr Leu Val Glu	Leu His Leu His His	Asn		
	290		295		300
Pro Trp Asn Cys	Asp Cys Asp Ile Leu	Trp Leu Ala Trp Trp	Leu		
	305		310		315
Arg Glu Tyr Ile	Pro Thr Asn Ser Thr	Cys Cys Gly Arg Cys	His		
	320		325		330
Ala Pro Met His	Met Arg Gly Arg Tyr	Leu Val Glu Val Asp	Gln		
	335		340		345
Ala Ser Phe Gln	Cys Ser Ala Pro Phe	Ile Met Asp Ala Pro	Arg		
	350		355		360
Asp Leu Asn Ile	Ser Glu Gly Arg Met	Ala Glu Leu Lys Cys	Arg		
	365		370		375
Thr Pro Pro Met	Ser Ser Val Lys Trp	Leu Leu Pro Asn Gly	Thr		
	380		385		390
Val Leu Ser His	Ala Ser Arg His Pro	Arg Ile Ser Val Leu	Asn		
	395		400		405
Asp Gly Thr Leu	Asn Phe Ser His Val	Leu Leu Ser Asp Thr	Gly		
	410		415		420
Val Tyr Thr Cys	Met Val Thr Asn Val	Ala Gly Asn Ser Asn	Ala		
	425		430		435
Ser Ala Tyr Leu	Asn Val Ser Thr Ala	Glu Leu Asn Thr Ser	Asn		
	440		445		450
Tyr Ser Phe Phe	Thr Thr Val Thr Val	Glu Thr Thr Glu Ile	Ser		
	455		460		465
Pro Glu Asp Thr	Thr Arg Lys Tyr Lys	Pro Val Pro Thr Thr	Ser		
	470		475		480
Thr Gly Tyr Gln	Pro Ala Tyr Thr Thr	Ser Thr Thr Val Leu	Ile		
	485		490		495
Gln Thr Thr Arg	Val Pro Lys Gln Val	Ala Val Pro Ala Thr	Asp		

Thr Thr Asp Lys	Met Gln Thr Ser Leu	Asp Glu Val Met Lys	Thr
515		520	525
Thr Lys Ile Ile	Ile Gly Cys Phe Val	Ala Val Thr Leu Leu	Ala
530		535	540
Ala Ala Met Leu	Ile Val Phe Tyr Lys	Leu Arg Lys Arg His	Gln
545		550	555
Gln Arg Ser Thr	Val Thr Ala Ala Arg	Thr Val Glu Ile Ile	Gln
560		565	570
Val Asp Glu Asp	Ile Pro Ala Ala Thr	Ser Ala Ala Ala Thr	Ala
575		580	585
Ala Pro Ser Gly	Val Ser Gly Glu Gly	Ala Val Val Leu Pro	Thr
590		595	600
Ile His Asp His	Ile Asn Tyr Asn Thr	Tyr Lys Pro Ala His	Gly
605		610	615
Ala His Trp Thr	Glu Asn Ser Leu Gly	Asn Ser Leu His Pro	Thr
620		625	630
Val Thr Thr Ile	Ser Glu Pro Tyr Ile	Ile Gln Thr His Thr	Lys
635		640	645
Asp Lys Val Gln	Glu Thr Gln Ile		
650			

<210> 230
 <211> 2846
 <212> DNA
 <213> Homo sapiens

<400> 230
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 tggggctcac ttttcttcag ctctttctca tctcgtcctt gccaaagagag 100
 tacacagtca ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150
 tcgggagtgct tgtgaatatg atcagattga gtgcgtctgc cccggaaaga 200
 gggaagtctgt ggggtataacc atcccttgcg gcaggaatga ggagaatgag 250
 tgtgactcct gcctgatcca ccaggttgt accatctttg aaaactgc aa 300
 gagctgcoga aatggctcat gggggggtac cttggatgac ttctatgtga 350
 aggggttcta ctgtgcagag tgccgagcag gctggtacgg aggagactgc 400
 atgcgatgtg gccagggttct gcgagcccca aagggtcaga ttttgttgga 450
 aagctatccc ctaaatgctc actgtgaatg gaccattcat gctaaacctg 500
 ggtttgtcat ccaactaaga tttgtcatgt tgagtctgga gtttgactac 550
 atgtgccagt atgactatgt tgaggttcgt gatggagaca accgcgatgg 600
 ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

gcataaggatc ctcaactccac gtccctcttcc actccgatgg ctccaagaat 700
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 cccttggttc catgacggca cgtgcgtcct tgacaaggct ggatcttaca 800
 agtgtgcctg cttggcaggc tatactgggc agcgctgtga aaatctcctt 850
 gaagaaagaa actgctcaga ccctgggggc ccagtcaatg ggtaccagaa 900
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 ccgtggtgtc tttcttttgt aacaactcct atgttcttag tggcaatgag 1000
 aaaagaactt gccagcagaa tggagagtgg tcagggaagc agcccatctg 1050
 cataaaagcc tgcgcagaa caaagatttc agacctggtg agaaggagag 1100
 ttcttccgat gcaggttcag tcaagggaga caccattaca ccagctatac 1150
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 ctgacatgc catcctgaag ctccatagaca aggcccgat cagcaccgca 1750
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 cactccttga gaagtgttc tgtatatccg tctgtactgt tgcattgag 2250

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gtccttttcc ttcccatct cttgtacaca ttttaataaa ataagggttg 2700
gcttctgaac tacaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2800
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2846

<210> 231
<211> 720
<212> PRT
<213> Homo sapiens

<400> 231
Met Glu Leu Gly Cys Trp Thr Gln Leu Gly Leu Thr Phe Leu Gln
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Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn
20 25 30
Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
35 40 45
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
50 55 60
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
65 70 75
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
80 85 90
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp
95 100 105
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
110 115 120
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
125 130 135
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
140 145 150
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
155 160 165

Phe Val Met Leu Ser Leu Glu Phe Asp Tyr Met Cys Gln Tyr Asp	170	175	180
Tyr Val Glu Val Arg Asp Gly Asp Asn Arg Asp Gly Gln Ile Ile	185	190	195
Lys Arg Val Cys Gly Asn Glu Arg Pro Ala Pro Ile Gln Ser Ile	200	205	210
Gly Ser Ser Leu His Val Leu Phe His Ser Asp Gly Ser Lys Asn	215	220	225
Phe Asp Gly Phe His Ala Ile Tyr Glu Glu Ile Thr Ala Cys Ser	230	235	240
Ser Ser Pro Cys Phe His Asp Gly Thr Cys Val Leu Asp Lys Ala	245	250	255
Gly Ser Tyr Lys Cys Ala Cys Leu Ala Gly Tyr Thr Gly Gln Arg	260	265	270
Cys Glu Asn Leu Leu Glu Glu Arg Asn Cys Ser Asp Pro Gly Gly	275	280	285
Pro Val Asn Gly Tyr Gln Lys Ile Thr Gly Gly Pro Gly Leu Ile	290	295	300
Asn Gly Arg His Ala Lys Ile Gly Thr Val Val Ser Phe Phe Cys	305	310	315
Asn Asn Ser Tyr Val Leu Ser Gly Asn Glu Lys Arg Thr Cys Gln	320	325	330
Gln Asn Gly Glu Trp Ser Gly Lys Gln Pro Ile Cys Ile Lys Ala	335	340	345
Cys Arg Glu Pro Lys Ile Ser Asp Leu Val Arg Arg Arg Val Leu	350	355	360
Pro Met Gln Val Gln Ser Arg Glu Thr Pro Leu His Gln Leu Tyr	365	370	375
Ser Ala Ala Phe Ser Lys Gln Lys Leu Gln Ser Ala Pro Thr Lys	380	385	390
Lys Pro Ala Leu Pro Phe Gly Asp Leu Pro Met Gly Tyr Gln His	395	400	405
Leu His Thr Gln Leu Gln Tyr Glu Cys Ile Ser Pro Phe Tyr Arg	410	415	420
Arg Leu Gly Ser Ser Arg Arg Thr Cys Leu Arg Thr Gly Lys Trp	425	430	435
Ser Gly Arg Ala Pro Ser Cys Ile Pro Ile Cys Gly Lys Ile Glu	440	445	450
Asn Ile Thr Ala Pro Lys Thr Gln Gly Leu Arg Trp Pro Trp Gln	455	460	465
Ala Ala Ile Tyr Arg Arg Thr Ser Gly Val His Asp Gly Ser Leu	470	475	480

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<223> Synthetic oligonucleotide probe

<400> 233
tgccaaggac gcaactgccgt catg 24

<210> 234
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 234
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gtcctatoc 50

<210> 235
<211> 1964
<212> DNA
<213> Homo sapiens

<400> 235
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agctcaactt gaagctttct tgcctgcagt gaagcagaga gatagatatt 100
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caaattccga ttactgttgc tgttgacttt gtgcctgaca gtgggtgggt 200
gggccaccag taactacttc gtgggtgcca ttcaagagat tcctaaagca 250
aaggagtcca tggctaattt ccataagacc ctcatcttgg ggaaggga 300
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gatctcaact tgggaagggt acaggcagaa aatcccaaag tgtccagagg 450
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cagtgatgcc caccagagaa tacattctct attagttttt aaagagtttt 1850
tgtaaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900
acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaa 1950
gtgaaaaagc aaaa 1964

<210> 236
<211> 344
<212> PRT
<213> Homo sapiens

<220>
<221> Signal peptide
<222> 1-27
<223> Signal peptide

<220>
<221> N-glycosylation sites
<222> 4-7, 220-223, 335-338
<223> N-glycosylation sites

<220>
<221> Xylose isomerase proteins
<222> 191-201
<223> Xylose isomerase proteins

<400> 236
Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu
1 5 10 15

Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	
				20					25					30	
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	
				35					40					45	
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	
				50					55					60	
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	
				65					70					75	
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	
				80					85					90	
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	
				95					100					105	
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	
				110					115					120	
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	
				125					130					135	
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	
				140					145					150	
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	
				155					160					165	
Lys	Ly's	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	
				170					175					180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	
				185					190					195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	
				200					205					210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	
				215					220					225	
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg	
				230					235					240	
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly	
				245					250					255	
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln	
				260					265					270	
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr	
				275					280					285	
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu	
				290					295					300	
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp	
				305					310					315	
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn	
				320					325					330	

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
335 340

<210> 237
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 237
ccttacctca gaggccagag caagc 25

<210> 238
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 238
gagcttcacg cgttctgcgt tcacc 25

<210> 239
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 239
caggaatgta aagctttaca gagggctgcc atcctcggtc cccacc 46

<210> 240
<211> 2567
<212> DNA
<213> Homo sapiens

<400> 240
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gccgcagttc tcgagctcca gctgcattcc ctccgcgtcc gccccacgct 100
tctcccgctc cgggccccgc aatggcccag gcagtggtgt cgcgcctcgg 150
ccgcattctc tggtttgect gcctcctgcc ctgggcccg gcagggtgtg 200
ccgcaggcct gtatgaactc aatctcacc ccgatagccc tgccaccacg 250
ggagcgttgg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300
cctggccctg cccgctgacg cccacctcta ccgcttcac tggtaccaca 350
ccccgctggt gcttactggc aagatggaga aggtctctag ctccaccatc 400
cgtgtgtgtg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450
tgccgctgac tgctggatgt gccagcctgt ggccaggggc tttgtgtgcc 500
tccccatcac agagtctctc gtgggggacc ttgtgtcac ccagaacact 550

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 ggtgpcggag tgggaagagg tggagccgga tgccacgagg gctgtgaagc 800
 agaagaccgg ggaacttctc gctcgcgtga agctgcagga aacccttcga 850
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 ctggagactc catctgagta cctggaaatt gttcgtgaga accacgggct 1350
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 gcgagactct gtctcca 2567

<210> 241
 <211> 423
 <212> PRT
 <213> Homo sapiens

<400> 241
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 Ala Cys Leu Leu Pro Trp Ala Pro Ala Gly Val Ala Ala Gly Leu
 20 25 30
 Tyr Glu Leu Asn Leu Thr Thr Asp Ser Pro Ala Thr Thr Gly Ala
 35 40 45
 Val Val Thr Ile Ser Ala Ser Leu Val Ala Lys Asp Asn Gly Ser
 50 55 60
 Leu Ala Leu Pro Ala Asp Ala His Leu Tyr Arg Phe His Trp Ile
 65 70 75
 His Thr Pro Leu Val Leu Thr Gly Lys Met Glu Lys Gly Leu Ser
 80 85 90
 Ser Thr Ile Arg Val Val Gly His Val Pro Gly Glu Phe Pro Val
 95 100 105
 Ser Val Trp Val Thr Ala Ala Asp Cys Trp Met Cys Gln Pro Val
 110 115 120
 Ala Arg Gly Phe Val Val Leu Pro Ile Thr Glu Phe Leu Val Gly
 125 130 135
 Asp Leu Val Val Thr Gln Asn Thr Ser Leu Pro Trp Pro Ser Ser
 140 145 150
 Tyr Leu Thr Lys Thr Val Leu Lys Val Ser Phe Leu Leu His Asp
 155 160 165
 Pro Ser Asn Phe Leu Lys Thr Ala Leu Phe Leu Tyr Ser Trp Asp
 170 175 180
 Phe Gly Asp Gly Thr Gln Met Val Thr Glu Asp Ser Val Val Tyr
 185 190 195

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggcag 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccacgaccg agcaacttc toaagaccga cttgtttctc tacagc 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gtcacaagacc cagcagtgagg acagccagac agacggcagc atggcactga 50
gtccccagat ctggggccgct tgcctcctgc tccctcctct cctgcgcagc 100
ctgaccagtg gctctgtttt cccacaacag acgggacaac ttgcagagct 150
gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200
agaggcgaag gagggagagc acccaacttc ccattctgat tttctgctgc 250
ggctgctgct atogatcaaa gtgtgggatg tgctgcaaga cgtagnacct 300
acctgccctg cccccgtccc ctcccttctc tatttattcc tgcgtcccca 350
gaacataggt ctggaataa aatggctggt tcttttggtt tccaaaaaaa 400
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr
80

<210> 247
<211> 2359
<212> DNA
<213> Homo sapiens

<400> 247
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tgctggcctg gcctggatct tccaccatgt tctgttgcgt gccttttgat 100
agcctgattg tcaacctctt gggcatctcc ctgactgtcc tcttaccctc 150
ccttctcgtt ttcacatag tgccagccat ttttgagctc tcctttggta 200
tcgcgaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250
ttgagaatgg agcaggaggc caaggagaag aaccaccagc ttacaaaggc 300
ctacaccaac ggaatcattg caaaggatcc cacttcaact gaagaagaga 350
tcaaagagat tcgtcgaaat ggtagtagta aggctctgga caacactcca 400
gagttcgagc tctctgacat tttctacttt tgccgaaaag gaatggagac 450
cattatggat gatgaggta caaagagatt ctacagagaa gaactggagt 500
cctggaacct gctgagcaga accaattata acttccagta catcagcctt 550
cggtcacagg tctgtgggg gttaggagtg ctgattcggt actgctttct 600
gctgcgcgtc aggatagcac tggctttcac agggattagc cttctgggtg 650
tgggcacaac tgtgttgga tacttgccaa atgggaggtt taaggaattc 700
atgagtaaac atgttcaact aatgtgttac cggatctgcg tgcgagcgct 750
gacagccatc atcactacc atgacaggga aacagacca agaaatggtg 800
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gagcoacagt ttacctgtt gctatcaagt atgacctca atttggcgat 1150
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gccattgccca ggcagggagg acttgtggac ctgctgtggg atgggggcct 1350

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 gttgtgggga ttaaagtgtc gccgggtgag gaaggacaca tcacgttcag 2250
 tgtttcaagt acaggccccc aaaaaggggc acggcaggcc tgagctcaga 2300
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 ggtgaatga 2359

<210> 248
 <211> 456
 <212> PRT
 <213> Homo sapiens

<400> 248
 Met Phe Leu Leu Leu Pro Phe Asp Ser Leu Ile Val Asn Leu Leu
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 Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile
 20 25 30
 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu
 35 40 45
 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg
 50 55 60
 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro
 65 70 75

Tyr	Thr	Asn	Gly	Ile 80	Ile	Ala	Lys	Asp	Pro 85	Thr	Ser	Leu	Glu	Glu 90
Glu	Ile	Lys	Glu	Ile 95	Arg	Arg	Ser	Gly	Ser 100	Ser	Lys	Ala	Leu	Asp 105
Asn	Thr	Pro	Glu	Phe 110	Glu	Leu	Ser	Asp	Ile 115	Phe	Tyr	Phe	Cys	Arg 120
Lys	Gly	Met	Glu	Thr 125	Ile	Met	Asp	Asp	Glu 130	Val	Thr	Lys	Arg	Phe 135
Ser	Ala	Glu	Glu	Leu 140	Glu	Ser	Trp	Asn	Leu 145	Leu	Ser	Arg	Thr	Asn 150
Tyr	Asn	Phe	Gln	Tyr 155	Ile	Ser	Leu	Arg	Leu 160	Thr	Val	Leu	Trp	Gly 165
Leu	Gly	Val	Leu	Ile 170	Arg	Tyr	Cys	Phe	Leu 175	Leu	Pro	Leu	Arg	Ile 180
Ala	Leu	Ala	Phe	Thr 185	Gly	Ile	Ser	Leu	Leu 190	Val	Val	Gly	Thr	Thr 195
Val	Val	Gly	Tyr	Leu 200	Pro	Asn	Gly	Arg	Phe 205	Lys	Glu	Phe	Met	Ser 210
Lys	His	Val	His	Leu 215	Met	Cys	Tyr	Arg	Ile 220	Cys	Val	Arg	Ala	Leu 225
Thr	Ala	Ile	Ile	Thr 230	Tyr	His	Asp	Arg	Glu 235	Asn	Arg	Pro	Arg	Asn 240
Gly	Gly	Ile	Cys	Val 245	Ala	Asn	His	Thr	Ser 250	Pro	Ile	Asp	Val	Ile 255
Ile	Leu	Ala	Ser	Asp 260	Gly	Tyr	Tyr	Ala	Met 265	Val	Gly	Gln	Val	His 270
Gly	Gly	Leu	Met	Gly 275	Val	Ile	Gln	Arg	Ala 280	Met	Val	Lys	Ala	Cys 285
Pro	His	Val	Trp	Phe 290	Glu	Arg	Ser	Glu	Val 295	Lys	Asp	Arg	His	Leu 300
Val	Ala	Lys	Arg	Leu 305	Thr	Glu	His	Val	Gln 310	Asp	Lys	Ser	Lys	Leu 315
Pro	Ile	Leu	Ile	Phe 320	Pro	Glu	Gly	Thr	Cys 325	Ile	Asn	Asn	Thr	Ser 330
Val	Met	Met	Phe	Lys 335	Lys	Gly	Ser	Phe	Glu 340	Ile	Gly	Ala	Thr	Val 345
Tyr	Pro	Val	Ala	Ile 350	Lys	Tyr	Asp	Pro	Gln 355	Phe	Gly	Asp	Ala	Phe 360
Trp	Asn	Ser	Ser	Lys 365	Tyr	Gly	Met	Val	Thr 370	Tyr	Leu	Leu	Arg	Met 375
Met	Thr	Ser	Trp	Ala 380	Ile	Val	Cys	Ser	Val 385	Trp	Tyr	Leu	Pro	Pro 390

Met Thr Arg Glu Ala Asp Glu Asp Ala Val Gln Phe Ala Asn Arg
 395 400
 Val Lys Ser Ala Ile Ala Arg Gln Gly Gly Leu Val Asp Leu Leu
 410 415 420
 Trp Asp Gly Gly Leu Lys Arg Glu Lys Val Lys Asp Thr Phe Lys
 425 430 435
 Glu Glu Gln Gln Lys Leu Tyr Ser Lys Met Ile Val Gly Asn His
 440 445 450
 Lys Asp Arg Ser Arg Ser
 455

<210> 249
 <211> 1103
 <212> DNA
 <213> Homo sapiens

<400> 249
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 gcctcggca gcctcggcct ccacacctgg caggcccagg ctgttcccac 150
 catcctgccc ctgggcctgg ctccagacac ctttgacgat acctatgttg 200
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 agaatggaat agccattatg gtctacacca actcatcgaa caccttgatc 400
 tgggagttga atcaggccgt gcggacgggc ggaggtccc gggagctcta 450
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 tgcagctgct gcgaggcagt gggggctgca gcaggggacc tggggaggtg 550
 gtgttccgag gtgtgggcag ccttcgcttt gaaccaaga ggtcggggga 600
 ctctgtccgc ttgggccagt ttgcctccag ctccctggat aaggcagtg 650
 cccacagatt tggggagaag aggcggggct gtgtgtctgc gccagggggtg 700
 cagctagggt cacaatctga gggggcctcc tctctgcccc cctggaagac 750
 tctgtctttg gccctggag agttccagct ctccagggtt gggccctgaa 800
 agtccaaat ctgccactta ggagccctgg gaacgggtga ccttcatatg 850
 acgaagaggc acctccagca gccttgagaa gcaagaacat ggttccggac 900
 ccagccctag cagccttctc cccaaccagg atgttggcct ggggaggcca 950
 cagcagggct gagggaaact tgctatgtga tggggacttc ctgggacaag 1000
 caaggaaagt actgaggcag ccacttgatt gaacggtgtt gcaatgtgga 1050

gacatggagt tttattgagg tagctacgtg attaaatggt attgcagtgt 1100
gga 1103

<210> 250
<211> 240
<212> PRT
<213> Homo sapiens

<400> 250
Met Ala Leu Ala Ala Leu Met Ile Ala Leu Gly Ser Leu Gly Leu
1 5 10 15
His Thr Trp Gln Ala Gln Ala Val Pro Thr Ile Leu Pro Leu Gly
20 25 30
Leu Ala Pro Asp Thr Phe Asp Asp Thr Tyr Val Gly Cys Ala Glu
35 40 45
Glu Met Glu Glu Lys Ala Ala Pro Leu Leu Lys Glu Glu Met Ala
50 55 60
His His Ala Leu Leu Arg Glu Ser Trp Glu Ala Ala Gln Glu Thr
65 70 75
Trp Glu Asp Lys Arg Arg Gly Leu Thr Leu Pro Pro Gly Phe Lys
80 85 90
Ala Gln Asn Gly Ile Ala Ile Met Val Tyr Thr Asn Ser Ser Asn
95 100 105
Thr Leu Tyr Trp Glu Leu Asn Gln Ala Val Arg Thr Gly Gly Gly
110 115 120
Ser Arg Glu Leu Tyr Met Arg His Phe Pro Phe Lys Ala Leu His
125 130 135
Phe Tyr Leu Ile Arg Ala Leu Gln Leu Leu Arg Gly Ser Gly Gly
140 145 150
Cys Ser Arg Gly Pro Gly Glu Val Val Phe Arg Gly Val Gly Ser
155 160 165
Leu Arg Phe Glu Pro Lys Arg Leu Gly Asp Ser Val Arg Leu Gly
170 175 180
Gln Phe Ala Ser Ser Ser Leu Asp Lys Ala Val Ala His Arg Phe
185 190 195
Gly Glu Lys Arg Arg Gly Cys Val Ser Ala Pro Gly Val Gln Leu
200 205 210
Gly Ser Gln Ser Glu Gly Ala Ser Ser Leu Pro Pro Trp Lys Thr
215 220 225
Leu Leu Leu Ala Pro Gly Glu Phe Gln Leu Ser Gly Val Gly Pro
230 235 240

<210> 251
<211> 50
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 251

ccaccacctg gaggtcctgc agttgggcag gaattccatc cggcagattg 50

<210> 252

<211> 1076

<212> DNA

<213> Homo sapiens

<400> 252

gtgggttcac ttcagtgggt gacttccaga gagcaatatg gctgggtccc 50

caacatgcct caccctcatc tatatccttt ggcagctcac aggggtcagca 100

gcctctggac ccgtgaaaga gctgggtcggg tccgttggtg gggccgtgac 150

tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200

tcaacacaa cctcttgtc accatacagc cagaaggggg cactatcata 250

gtgacccaaa atcgtaatat ggagagagta gacttccagc atggaggcta 300

ctccctgaag ctacagaaac tgaagaagaa tgactcaggg atctactatg 350

tggggatata cagctcatca ctccagcagc cctccacca ggagtacgtg 400

ctgcagtgtc acgagcacct gtcaaagcct aaagtcacca tgggtctgca 450

gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattgaaac 500

atgggggaaga ggatgtgatt tatacctgga aggccctggg gcaagcagcc 550

aatgagtccc ataattgggt catcctcccc atctcctgga gatggggaga 600

aagtgatatg accttcatct gcgttgccag gaaccctgtc agcagaaact 650

tctcaagccc catccttgcc aggaagctct gtgaagggtc tgcgtgatgac 700

ccagattcct ccattggtcct cctgtgtctc ctgttggtgc cctcctgct 750

cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800

aagaagagta cattgaagag aagaagagag tggacatttg tccggaaact 850

cctaacaatg gccccattc tggagagaac acagagtacg acacaatccc 900

tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950

ccactgtgga aataccgaaa aagatgaaa atccccactc actgctcacg 1000

atgcagagca caccaaggct atttgcctat gagaatgta tctagacagc 1050

agtgcactcc cctaagtctc tgcaca 1076

<210> 253

<211> 335

<212> PRT

<213> Homo sapiens

<400> 253

Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

1	5	10	15
Gln Leu Thr Gly	Ser 20	Ala Ala Ser Gly	Pro 25
Gly Ser Val Gly	Gly 35	Ala Val Thr Phe	Pro 40
Lys Gln Val Asp	Ser 50	Ile Val Trp Thr	Phe 55
Val Thr Ile Gln	Pro 65	Glu Gly Gly Thr	Ile 70
Arg Asn Arg Glu	Arg 80	Val Asp Phe Pro	Asp 85
Lys Leu Ser Lys	Leu 95	Lys Lys Asn Asp	Ser 100
Gly Ile Tyr Ser	Ser 110	Ser Leu Gln Gln	Pro 115
Val Leu His Val	Tyr 125	Glu His Leu Ser	Lys 130
Gly Leu Gln Ser	Asn 140	Lys Asn Gly Thr	Cys 145
Cys Cys Met Glu	His 155	Gly Glu Glu Asp	Val 160
Ala Leu Gly Gln	Ala 170	Ala Asn Glu Ser	His 175
Pro Ile Ser Trp	Arg 185	Trp Gly Glu Ser	Asp 190
Val Ala Arg Asn	Pro 200	Val Ser Arg Asn	Phe 205
Ala Arg Lys Leu	Cys 215	Glu Gly Ala Ala	Asp 220
Met Val Leu Leu	Cys 230	Leu Leu Leu Val	Pro 235
Phe Val Leu Gly	Leu 245	Phe Leu Trp Phe	Leu 250
Glu Glu Tyr Ile	Glu 260	Glu Lys Lys Arg	Val 265
Thr Pro Asn Ile	Cys 275	Pro His Ser Gly	Glu 280
Thr Ile Pro His	Thr 290	Asn Arg Thr Ile	Leu 295
Asn Thr Val Tyr	Ser 305	Thr Val Glu Ile	Pro 310
Pro His Ser Leu	Leu	Thr Met Pro Asp	Thr
		Pro Arg Leu Phe	Ala

Tyr Glu Asn Val Ile
335

<210> 254
<211> 1053
<212> DNA
<213> Homo sapiens

<400> 254
ctggttcccc aacatgcctc accctcatct atatcctttg gcagctcaca 50
gggtcagcag cctctggacc cgtgaaagag ctggtcggtt cgttgggttg 100
ggccgtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150
tctggacctt caacacaacc cctcttgtca ccatacagcc agaagggggc 200
actatcatag tgacccaaaa tcgtaatatg gagagagtag acttcccaga 250
tgagggttac tccctgaagc tcagcaaaact gaagaagaat gactcaggga 300
tctactatgt ggggatatac agctcatcac tcacagagcc ctccacccag 350
gagtaactgc tgcattgtct cgagcacctg tcaaaagccta aagtcaccat 400
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450
gcatggaaca tggggaagag gatgtgattt atacctggaa ggccctgggg 500
caagcagcca atgagtccca taatgggtcc atcctcccca tctcctggag 550
atggggagaa agtgatatga ccttcatctg cgttgcoagg aacctgttca 600
gcagaaactt ctcaagcccc atccttgcca ggaagctctg tgaagggtgt 650
gctgatgacc cagattcctc catggtcctc ctgtgtctcc tgttgggtgc 700
cctcctgtct agtctctttg taactggggtc atttctttgg tttctgaaga 750
gagagagaca agaagagtag attgaagaga agaagagagt ggacatttgt 800
cgggaaactc ctaacatatg ccccatctct ggagagaaca cagagtacga 850
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaaata 900
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950
ctgtctcaga tgccagacac accaaggcta ttgctctatg agaattgtat 1000
ctagacagca gtgcaactcc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050
aaa 1053

<210> 255
<211> 860
<212> DNA
<213> Homo sapiens

<400> 255
gaaagacgtg gtccctgacag acagacaatc ctattcccta ccaaaatgaa 50

gatgctgctg ctgctgtgtt tgggactgac cctagtctgt gtccatgcag 100
 aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
 gaatggcata ctattatcct ggcctctgac aaaagagaaa agatagaaga 200
 acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250
 cctagtcttc taaagtccat actgtaagag atgaagagtg ctccgaatta 300
 tctatggttg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
 tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
 ttatggctca cctcattaac gaaaaggatg gggaaacott ccagctgatg 450
 gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500
 tgcacaacta tgtgaggagc atggaatcct tagagaaaa atcattgacc 550
 tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600
 gcctccagtg ttgagtggac acttctcacc aggactccac catcatccct 650
 tcctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
 ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
 acctcatcaa gaatcaaaga cttctttaa tttctctttg atacaccott 800
 gacaattttt catgaaatta ttctctcttc tgttcaataa atgattaccc 850
 ttgcacttaa 860

<210> 256
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 256
 Met Lys Met Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys
 1 5 10 15
 Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val
 20 25 30
 Glu Lys Ile Asn Gly Glu Trp His Thr Ile Ile Leu Ala Ser Asp
 35 40 45
 Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu
 50 55 60
 Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His
 65 70 75
 Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp
 80 85 90
 Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe
 95 100 105
 Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met
 110 115 120

Ala	His	Leu	Ile	Asn	Glu	Lys	Asp	Gly	Glu	Thr	Phe	Gln	Leu	Met
				125					130					135
Gly	Leu	Tyr	Gly	Arg	Glu	Pro	Asp	Leu	Ser	Ser	Asp	Ile	Lys	Glu
				140					145					150
Arg	Phe	Ala	Gln	Leu	Cys	Glu	Glu	His	Gly	Ile	Leu	Arg	Glu	Asn
				155					160					165
Ile	Ile	Asp	Leu	Ser	Asn	Ala	Asn	Arg	Cys	Leu	Gln	Ala	Arg	Glu
				170					175					180

<210> 257
 <211> 766
 <212> DNA
 <213> Homo sapiens

<400> 257
 ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50
 gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100
 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150
 tctcaaaacc ccatctcttg ctttgagtgg tggttccacg gaattatag 200
 agcaggctcg atggccattc cagcaacaac aatgtccttg acagcaagaa 250
 aaagagcgtg ctgcaacaac agaactggaa tgtttcttcc atcatttttc 300
 agtgtgatca cagtcattgg tgctctgtat tgcctgctga tatccatcca 350
 ggctctctta aaaggtcctc tcatgtgtaa ttctccaagc aacagtaatg 400
 ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
 ttcaacttgc agtggttttt caatgactct tgtgcacctc ctactggttt 500
 caataaacc accagtaacg acaccatggc gagtggctgg agagcatcta 550
 gttccaactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600
 gtatttttag gtctattgct tgttgggaatt ctggaggctc tgtttgggct 650
 cagtcagata gtcacgggtt tccttggtcg tctgtgtgga gtcctcaagc 700
 gaagaagtca aattgtgtag tttaattgga ataaaatgta agtatcagta 750
 gtttgaaaaa aaaaaa 766

<210> 258
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 258
 Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
 1 5 10
 Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
 20 25 30
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile

	35	40	45
Ser Cys Phe Glu	Trp Trp Phe Pro Gly Ile	Ile Gly Ala Gly	Leu
	50	55	60
Met Ala Ile Pro	Ala Thr Thr Met Ser Leu	Thr Ala Arg Lys Arg	
	65	70	75
Ala Cys Cys Asn	Asn Arg Thr Gly Met Phe	Leu Ser Ser Phe Phe	
	80	85	90
Ser Val Ile Thr	Val Ile Gly Ala Leu Tyr	Cys Met Leu Ile Ser	
	95	100	105
Ile Gln Ala Leu	Leu Lys Gly Pro Leu Met	Cys Asn Ser Pro Ser	
	110	115	120
Asn Ser Asn Ala	Asn Cys Glu Phe Ser Leu	Lys Asn Ile Ser Asp	
	125	130	135
Ile His Pro Glu	Ser Phe Asn Leu Gln Trp	Phe Phe Asn Asp Ser	
	140	145	150
Cys Ala Pro Pro	Thr Gly Phe Asn Lys Pro	Thr Ser Asn Asp Thr	
	155	160	165
Met Ala Ser Gly	Trp Arg Ala Ser Ser Phe	His Phe Asp Ser Glu	
	170	175	180
Glu Asn Lys His	Arg Leu Ile His Phe Ser	Val Phe Leu Gly Leu	
	185	190	195
Leu Leu Val Gly	Ile Leu Glu Val Leu Phe	Gly Leu Ser Gln Ile	
	200	205	210
Val Ile Gly Phe	Leu Gly Cys Leu Cys Gly	Val Ser Lys Arg Arg	
	215	220	225
Ser Gln Ile Val			

<210> 259

<211> 434

<212> DNA

<213> Homo sapiens

<400> 259

gtcgaatcca aatcactcat tgtgaaagct gagctcacag ccgaataaagc 50
 caccatgagg ctgtcagtgt gtctctgat ggtctcgtg gccctttgct 100
 gctaccaggc coatgctctt gtctgccag ctgttgcttc tgagatcaca 150
 gtctctttat tettaagtga cgctgcggta aacctccaag ttgccaaact 200
 taatccacct ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250
 ccgatcagat atcttttaag aaacgactct cattgaaaaa gtcctgggtg 300
 aaatagttaa aaaatgtggt gtgtgacatg taaaaatgct caacctgtgt 350
 tccaaagtct ttcaacgaca ccctgatctt cactaaaaat tgtaaagggt 400

tcaacacggtt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys
1 5 10 15
Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu
20 25 30
Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln
35 40 45
Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Ala Lys Leu
50 55 60
Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu
65 70 75
Ser Leu Lys Lys Ser Trp Trp Lys
80

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

atccgttctc tgcgtcgcca gtcaggtga gccctcgcca aggtgacctc 50
gcaggacact ggtgaaggag cagtgaggaa cctgcagagt cacacagttg 100
ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150
cgccccagtg cctctcccc tgcagccctg ccctcgaac tgtgacatgg 200
agagagtgc cctggccctt ctctactgg caggcctgac tgccttgaa 250
gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300
aaacctgcag ctgagcggac tgatctcgcg agggctcctg gccattgctg 350
ggatcgggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400
cagcagatc ctgtacctga gaaggccatc ccactcatca ctccaggctc 450
tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500
taacactggc ccccgagacc tctctccctg ggaggcotta tcctcaagga 550
aggacttctc tccaagggca ggctgttagg cccctttctg atcaggaggc 600
ttctttatga attaaactcg cccaccacc ccctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr
1 5 10 15

Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe
20 25 30

Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly
35 40 45

Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys
50 55 60

Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu
65 70 75

Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

ggagaagagg ttgtgtggga caagctgctc cgcagagaag gatgtcgctg 50

ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100

actcctgctg ctggtttgtg gctcctggct actcgcccgcc atcctggctt 150

ggacctatgc cttctataac aactgccgcc ggctccagtgt ttccacacag 200

ccccaaaac ggaactgggt ttggggctcac ctgggctgta tcaactctac 250

agaggagggc ttgaaggact cgaccagat gtcggccacc tattcccagg 300

gctttacggt atggctgggt cccatcatcc ccttcacgt tttatgccac 350

cctgacacca tccggtctat caccaatgcc tcagctgcca ttgcacccaa 400

ggataatctc ttcacaggt tcttgaagcc ctggctggga gaagggatac 450

tgctgagtgg cgggtgacaag tggagccgcc accgtcggat gctgacgccc 500

gcctccatt tcaacatcct gaagtctat ataacgatct tcaacaagag 550

tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600

gtcgtctgga catgttttag cacatcagcc tcatgacctt ggacagtcta 650

cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700

atatattgcc accatcttgg agctcagtgc ccttgtagag aaaagaagcc 750

agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800

cggcgcttcc acagggcctg ccgcctgggt catgacttca cagacgctgt 850

catccgggag cggcgctgca cctcccccac tcagggtatt gatgattttt 900

tcaaagacaa agccaagtcc aagactttgg atttcattga tgtgctctgt 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
 agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050
 tctctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100
 tgccgacagg aggtgcaaga gcttctgaag gaccgcgacg ctaaagagat 1150
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 agagcctgag gttacatccc ccagctccct tcatctcccg atgtgcacc 1250
 caggacattg ttctcccaga tggccgagtc atcccaaaag gcattacctg 1300
 cctcatcgat attatagggg tccatcacia cccaactgtg tggccggatc 1350
 ctgaggtcta cgaccccttc cgtcttgacc cagagaacag caagggggagg 1400
 tcacctctgg cttttattcc tttctcgcga gggcccaggga actgcactcg 1450
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 tgcacttcgg gttcctgcc gaccacactg agccccgcag gaagctggaa 1550
 ttgatcatgc gcgccgagg cgggccttgg ctgcgggtgg agccccgaa 1600
 tgtaggcttg cagtgcactt ctgaccctac cactgtttt tttgcagatt 1650
 gtcataata aaacggtgct gtcaaa 1676

<210> 264
 <211> 524
 <212> PRT
 <213> Homo sapiens

<400> 264
 Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala
 1 5 10 15
 Met Ser Pro Trp Leu Leu Leu Leu Val Val Gly Ser Trp Leu
 20 25 30
 Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys
 35 40 45
 Arg Arg Leu Gln Cys Phe Pro Gln Pro Pro Lys Arg Asn Trp Phe
 50 55 60
 Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys
 65 70 75
 Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val
 80 85 90
 Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp
 95 100 105
 Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys
 110 115 120
 Asp Asn Leu Phe Ile Arg Phe Leu Lys Pro Trp Leu Gly Glu Gly
 125 130 135

Ile Leu Leu Ser	Gly Gly Asp Lys Trp	Ser Arg His Arg Arg Met
140	145	150
Leu Thr Pro Ala	Phe His Phe Asn Ile	Leu Lys Ser Tyr Ile Thr
155	160	165
Ile Phe Asn Lys	Ser Ala Asn Ile Met	Leu Asp Lys Trp Gln His
170	175	180
Leu Ala Ser Glu	Gly Ser Ser Arg Leu Asp	Met Phe Glu His Ile
185	190	195
Ser Leu Met Thr	Leu Asp Ser Leu Gln	Lys Cys Ile Phe Ser Phe
200	205	210
Asp Ser His Cys	Gln Glu Arg Pro Ser	Glu Tyr Ile Ala Thr Ile
215	220	225
Leu Glu Leu Ser	Ala Leu Val Glu Lys	Arg Ser Gln His Ile Leu
230	235	240
Gln His Met Asp	Phe Leu Tyr Tyr Leu	Ser His Asp Gly Arg Arg
245	250	255
Phe His Arg Ala	Cys Arg Leu Val His	Asp Phe Thr Asp Ala Val
260	265	270
Ile Arg Glu Arg	Arg Arg Thr Leu Pro	Thr Gln Gly Ile Asp Asp
275	280	285
Phe Phe Lys Asp	Lys Ala Lys Ser Lys	Thr Leu Asp Phe Ile Asp
290	295	300
Val Leu Leu Leu	Ser Lys Asp Glu Asp	Gly Lys Ala Leu Ser Asp
305	310	315
Glu Asp Ile Arg	Ala Glu Ala Asp Thr	Phe Met Phe Gly Gly His
320	325	330
Asp Thr Thr Ala	Ser Gly Leu Ser Trp	Val Leu Tyr Asn Leu Ala
335	340	345
Arg His Pro Glu	Tyr Gln Glu Arg Cys	Arg Gln Glu Val Gln Glu
350	355	360
Leu Leu Lys Asp	Arg Asp Pro Lys Glu	Ile Glu Trp Asp Asp Leu
365	370	375
Ala Gln Leu Pro	Phe Leu Thr Met Cys	Val Lys Glu Ser Leu Arg
380	385	390
Leu His Pro Pro	Ala Pro Phe Ile Ser	Arg Cys Cys Thr Gln Asp
395	400	405
Ile Val Leu Pro	Asp Gly Arg Val Ile	Pro Lys Gly Ile Thr Cys
410	415	420
Leu Ile Asp Ile	Ile Gly Val His His	Asn Pro Thr Val Trp Pro
425	430	435
Asp Pro Glu Val	Tyr Asp Pro Phe Arg	Phe Asp Pro Glu Asn Ser
440	445	450

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro
455 460 465

Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val
470 475 480

Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His
485 490 495

Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly
500 505 510

Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln
515 520

<210> 265
<211> 584
<212> DNA
<213> Homo sapiens

<400> 265
caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
ctggcctcct gctgttttgc ttccacagga ttcttaaato ctctcttattc 100
ttctctcttc ctgactcca gggaaatatac ctctcaactc tcagcacctc 150
atgaagacgc gcgttaact cgggaggagc tagaaagagc ttcccttcta 200
cagatattgc cagagatgct ggggtcagaa agaggggata ttctcaggaa 250
agcagactca agtaccacaa tttttaacc aagaggaaat ttgagaaagt 300
ttcaggattt ctotggacaa gatcotaaca ttttactgag tcactttttg 350
gccagaatct ggaaaccata caagaaacgt gagactcctg attgcttctg 400
gaaataactgt gctggaagt aaataagcat ctgttagtca gctcagaaac 450
acccatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500
tgagagaaaa ctaggcaaac tacacctgt tcattgttac ctggaaaata 550
aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
<211> 124
<212> PRT
<213> Homo sapiens

<400> 266
Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu
1 5 10 15

Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser
20 25 30

Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu
35 40 45

Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu
50 55 60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr
65 70
Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe
80 85 90
Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg
95 100 105
Ile Trp Lys Pro Tyr Lys Lys Arg Glu Thr Pro Asp Cys Phe Trp
110 115 120
Lys Tyr Cys Val

<210> 267
<211> 654
<212> DNA
<213> Homo sapiens

<400> 267
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taaggacctg acagccacca ggcaccacct cgcaggagaa ctgcaggccc 150
acctgtctgc aaccagctg aggccatgcc ctccccagg accgtctgca 200
gcctctctgt cctcgcatg ctctggctgg acttggccat ggcaggctcc 250
agcttctcga gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300
gaagccacca gccaaagtgc agccccgagc tctagcaggc tggctcggc 350
cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccgg 400
ttcaacgccc cctttgatgt tggaatcaag ctgtcagggg ttcagtacca 450
gcagcacagc caggccctgg ggaagtttct tcagacatc ctctgggaag 500
aggccaaaga ggccccagcc gacaagtgat cgccacaaag ccttactcac 550
ctctctctaa gtttagaagc gctcatctgg cttttcgett gcttctgcag 600
caactcccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650
tgta 654

<210> 268
<211> 117
<212> PRT
<213> Homo sapiens

<400> 268
Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Gly Met
1 5 10 15
Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro
20 25 30
Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro
35 40 45

Ala Lys Leu Gln Pro Arg Ala Leu Ala Gly Trp Leu Arg Pro Glu
50 55 60
Asp Gly Gly Gln Ala Glu Gly Ala Glu Asp Glu Leu Glu Val Arg
65 70 75
Phe Asn Ala Pro Phe Asp Val Gly Ile Lys Leu Ser Gly Val Gln
80 85 90
Tyr Gln Gln His Ser Gln Ala Leu Gly Lys Phe Leu Gln Asp Ile
95 100 105
Leu Trp Glu Glu Ala Lys Glu Ala Pro Ala Asp Lys
110 115

<210> 269
<211> 1332
<212> DNA
<213> Homo sapiens

<400> 269
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agaatatgaa cactggctg ctgttctctc cctgttctcc ggtgcagggtg 150
cagaccctga tagtcgtgat catcgggatg ctctgtctcc tcttggaatt 200
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cacgcctggg gccagagtct ttgtcccccg tgtgctgatg tgttcagggt 400
cagcctctcc cagaagtgag atcatggaca aaaaggga atcacaggaa 450
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gccgagacct gcaggagtgg tgccaggtgc ttgaagtaac aagtttaaaa 550
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cagagcatcc cctgcctgca gttgtggcaa gaacgccag ctcagaatga 1100
 acacacccca ccaagagcct ccttgttcat aaccacaggt tacctacaa 1150
 accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200
 cgcatacttt acagtcaactg ttgtcttgcc tgagggttga atttttttta 1250
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 270
 Met Asn Thr Trp Leu Leu Phe Leu Pro Leu Phe Pro Val Gln Val
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 Gln Thr Leu Ile Val Val Ile Ile Gly Met Leu Val Leu Leu Leu
 20 25 30
 Asp Phe Leu Gly Leu Val His Leu Gly Gln Leu Leu Ile Phe His
 35 40 45
 Ile Tyr Leu Ser Met Ser Pro Thr Leu Ser Pro Arg Ser Pro Gln
 50 55 60
 Gly Trp Val Val Arg Ala Ala His Leu Thr Pro Leu Leu Glu Tyr
 65 70 75
 Val Pro Asn Pro Glu Pro Pro Thr Pro Gly Ala Arg Val Phe Val
 80 85 90
 Pro Arg Val Arg Met Cys Ser Gly Ser Ala Ser Pro Arg Ser Glu
 95 100 105
 Ile Met Asp Lys Lys Gly Lys Ser Gln Glu Glu Ile Lys Ser Met
 110 115 120
 Arg Thr Gln Gln Ala Gln Gln Glu Ala Glu Leu Thr Pro Arg Pro
 125 130 135
 Ala Gly Val Val Pro Gly Ala
 140

<210> 271
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 271
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 accatggcca agatggagct ctccaaggcc ttctctggcc agcggacact 100
 cctatctgcc atcctcagca tgctataact cagcttctcc acaacatccc 150
 tgctcagcaa ctactggttt gtgggcacac agaaggtgcc caagcccctg 200
 tgcgagaag gtctggcagc caagtgcctt gacatgccag tgcctctgga 250

tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300
 ctggggatga ccggttctcc ttccggagct tccggagtgg catgtggcta 350
 tctgtgagg aaactgtgga agaaccaggg gagaggtgcc gaagtgtcat 400
 tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450
 ccacgttgca aggcccatgt caccacctc tccgatttgg agggaagcgg 500
 ttgatggaga aggttccct cccctccct ccttggggc tttgtggcaa 550
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 ctttgaccag ctaccaccag tatcataate agcccatcca cttctctct 1050
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 tcctaaggga ttctgggtg ccaactgctc ctttctctc acagctccat 1350
 cttgtttcac ccacccacac tctcacacat ccagaattcc cttctttact 1400
 gatagtttct gtgccaggtt ctggggctaaa ccattggagat aaaaagaaga 1450
 gtaaaatata cttcccgacc ttaaggatct gaaa 1484

<210> 272
 <211> 285
 <212> PRT
 <213> Homo sapiens

<400> 272
 Met Ala Lys Met Glu Leu Ser Lys Ala Phe Ser Gly Gln Arg Thr
 1 5 10 15
 Leu Leu Ser Ala Ile Leu Ser Met Leu Ser Leu Ser Phe Ser Thr
 20 25 30
 Thr Ser Leu Leu Ser Asn Tyr Trp Phe Val Gly Thr Gln Lys Val

<210> 275
 <211> 2694
 <212> DNA
 <213> Homo sapiens

<400> 275
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 atgtgcctt ccaatataca acaaaactcg gccctcttt gttctatttt 200
 tttacatctt ttcacctatt ccatactgca tagcaagaag attagtggat 250
 gatacagatg ctatgagtaa cgcttgtaag gaacttgcca tctttcttac 300
 aacgggcatt gtcgtgtcag cttttggact cctatttgta tttgccagag 350
 cacatctgat tgagtgggga gcttgtgcac ttgttctcac aggaaacaca 400
 gtcatctttg caactatact aggcctttttc ttggtctttg gaagcaatga 450
 cgacttcagc tggcagcagt ggtgaaaaga aattactgaa ctattgtcaa 500
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 gttaatgctg aatggtatag caagcctott ggggggtatt taggtgctcc 600
 cttctcactt ttattgtaag catactatct tcacagagac ttgctgaagg 650
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 ttacaaaaaa ttataaaaat aagttttcag tcagtcagga tgacatcact 950
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 tgcaatgtgg gaagaaatga cattgaaatt ccagtttttg aatccgtgtt 1300
 ctatttataa gtgaaatttg tgatctctta tcaaccttcc atgtttttacc 1350
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<210> 276
 <211> 131
 <212> PRT
 <213> Homo sapiens

<400> 276
 Met Ala Gly Ile Lys Ala Leu Ile Ser Leu Ser Phe Gly Gly Ala
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 Ile Gly Leu Met Phe Leu Met Leu Gly Cys Ala Leu Pro Ile Tyr
 20 25 30
 Asn Lys Tyr Trp Pro Leu Phe Val Leu Phe Phe Tyr Ile Leu Ser

	35		40		45
Pro Ile Pro Tyr	Cys Ile Ala Arg Arg Leu Val Asp Asp Thr Asp				
	50		55		60
Ala Met Ser Asn	Ala Cys Lys Glu Leu Ala Ile Phe Leu Thr				
	65		70		75
Gly Ile Val Val	Ser Ala Phe Gly Leu Pro Ile Val Phe Ala Arg				
	80		85		90
Ala His Leu Ile	Glu Trp Gly Ala Cys Ala Leu Val Leu Thr Gly				
	95		100		105
Asn Thr Val Ile	Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe				
	110		115		120
Gly Ser Asn Asp	Asp Phe Ser Trp Gln Gln Trp				
	125		130		

<210> 277
 <211> 4104
 <212> DNA
 <213> Homo sapiens

<400> 277
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 ccagaaatta tatctgtttt ggagcaagag tgcataatg tttcagggtg 3950
 gtcaaaaata acataaatta tctcctctag atgagtggcg atgttggtg 4000
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 gtca 4104

<210> 278
 <211> 522
 <212> PRT
 <213> Homo sapiens

<400> 278

Met	Asp	Phe	Leu	Leu	Leu	Gly	Leu	Cys	Leu	Tyr	Trp	Leu	Leu	Arg	15
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Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln	30
				20					25						
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys	45
				35					40						
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala	60
				50					55						
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn	75
				65					70						
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln	90
				80					85						
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln	105
				95					100						
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu	120
				110					115						
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro	135
				125					130						
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln	150
				140					145						
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr	165
				155					160						
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile	180
				170					175						
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn	195
				185					190						
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys	210
				200					205						
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn	225
				215					220						
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu	240
				230					235						
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val	255
				245					250						
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr	270
				260					265						
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu	285
				275					280						

Gln	Leu	Asp	Ser	Asn 290	Arg	Leu	Thr	Tyr	Ile 295	Glu	Pro	Arg	Ile	Leu 300
Asn	Ser	Trp	Lys	Ser 305	Leu	Thr	Ser	Ile	Thr 310	Leu	Ala	Gly	Asn	Leu 315
Trp	Asp	Cys	Gly	Arg 320	Asn	Val	Cys	Ala	Leu 325	Ala	Ser	Trp	Leu	Ser 330
Asn	Phe	Gln	Gly	Arg 335	Tyr	Asp	Gly	Asn	Leu 340	Gln	Cys	Ala	Ser	Pro 345
Glu	Tyr	Ala	Gln	Gly 350	Glu	Asp	Val	Leu	Asp 355	Ala	Val	Tyr	Ala	Phe 360
His	Leu	Cys	Glu	Asp 365	Gly	Ala	Glu	Pro	Thr 370	Ser	Gly	His	Leu	Leu 375
Ser	Ala	Val	Thr	Asn 380	Arg	Ser	Asp	Leu	Gly 385	Pro	Pro	Ala	Ser	Ser 390
Ala	Thr	Thr	Leu	Ala 395	Asp	Gly	Gly	Glu	Gly 400	Gln	His	Asp	Gly	Thr 405
Phe	Glu	Pro	Ala	Thr 410	Val	Ala	Leu	Pro	Gly 415	Gly	Glu	His	Ala	Glu 420
Asn	Ala	Val	Gln	Ile 425	His	Lys	Val	Val	Thr 430	Gly	Thr	Met	Ala	Leu 435
Ile	Phe	Ser	Phe	Leu 440	Ile	Val	Val	Leu	Val 445	Leu	Tyr	Val	Ser	Trp 450
Lys	Cys	Phe	Pro	Ala 455	Ser	Leu	Arg	Gln	Leu 460	Arg	Gln	Cys	Phe	Val 465
Thr	Gln	Arg	Arg	Lys 470	Gln	Lys	Gln	Lys	Gln 475	Thr	Met	His	Gln	Met 480
Ala	Ala	Met	Ser	Ala 485	Gln	Glu	Tyr	Tyr	Val 490	Asp	Tyr	Lys	Pro	Asn 495
His	Ile	Glu	Gly	Ala 500	Leu	Val	Ile	Ile	Asn 505	Glu	Tyr	Gly	Ser	Cys 510
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<210> 279

<212> DNA

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<223> Synthetic oligonucleotide probe

<400> 279

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<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

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 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 281
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 35 40 45
 Gly Ala Val Glu Phe Pro Ala Asp Lys Met Val Ser Val Leu Val
 50 55 60
 Gln Glu Gly His Ala Val Ser Asp Met Leu Leu Pro Leu Asp Gly
 65 70 75
 Glu Leu Val Leu Ala Ser Gly Ala Gly Phe Gly Val Ser Asp Val
 80 85 90
 Gly Ser His Leu Asp Cys Gly Ala Gly Glu Pro Ala Val Phe Arg
 95 100 105
 Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser
 110 115 120
 Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val
 125 130 135

Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe
 140 145 150
 Arg Val Gly Leu Gly Pro Gly Ala Ser Pro Val Arg Val Arg Ser
 155 160 165
 Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala
 170 175 180
 Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro
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 Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly
 200 205 210
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 215 220 225
 Leu Leu Gln Pro

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 <211> 644
 <212> DNA
 <213> Homo sapiens

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<210> 283
 <211> 77
 <212> PRT
 <213> Homo sapiens

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THE

THE

THE

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<210> 285

<211> 477
 <212> PRT
 <213> Homo sapiens

<400> 285

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				20					25					30	
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys	
				35					40					45	
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His	
				50					55					60	
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn	
				65					70					75	
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile	
				80					85					90	
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser	
				95					100					105	
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala	
				110					115					120	
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly	
				125					130					135	
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe	
				140					145					150	
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp	
				155					160					165	
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile	
				170					175					180	
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His	
				185					190					195	
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp	
				200					205					210	
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala	
				215					220					225	
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly	
				230					235					240	
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr	
				245					250					255	
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala	
				260					265					270	
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala	
				275					280					285	
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp	

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<210> 287

<211> 255

<212> PRT

<213> Homo sapiens

<400> 287

Met	Ala	Thr	Trp	Asp	Glu	Lys	Ala	Val	Thr	Arg	Arg	Ala	Lys	Val
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Ala	Pro	Ala	Glu	Arg	Met	Ser	Lys	Phe	Leu	Arg	His	Phe	Thr	Val
			20						25					30
Val	Gly	Asp	Asp	Tyr	His	Ala	Trp	Asn	Ile	Asn	Tyr	Lys	Lys	Trp
			35						40					45
Glu	Asn	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gln	Pro	Pro	Pro	Thr	
			50						55					60
Pro	Val	Ser	Gly	Glu	Glu	Gly	Arg	Ala	Ala	Pro	Asp	Val	Ala	
			65						70					75
Pro	Ala	Pro	Gly	Pro	Ala	Pro	Arg	Ala	Pro	Leu	Asp	Phe	Arg	Gly
			80						85					90
Met	Leu	Arg	Lys	Leu	Phe	Ser	Ser	His	Arg	Phe	Gln	Val	Ile	Ile
			95						100					105
Ile	Cys	Leu	Val	Val	Leu	Asp	Ala	Leu	Leu	Val	Leu	Ala	Glu	Leu
			110						115					120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala
				125					130					135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe
				140					145					150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser
				155					160					165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val
				170					175					180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe
				185					190					195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala
				200					205					210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu
				215					220					225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala
				230					235					240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp
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<210> 288
 <211> 3334
 <212> DNA
 <213> Homo sapiens

<400> 288
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 <211> 469
 <212> PRT
 <213> Homo sapiens

<400> 289
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 35 40 45
 Ser Thr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp
 50 55 60
 Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr
 65 70 75
 Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu
 80 85 90

Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln	95	100	105
Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	110	115	120
Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp	125	130	135
Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn	140	145	150
Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe	Asp	155	160	165
Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Leu	170	175	180
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	185	190	195
Ala	Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	200	205	210
Lys	Val	Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	215	220	225
Ile	Val	Gly	Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	230	235	240
Ser	Leu	Trp	Arg	Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	245	250	255
Glu	Ser	Ala	Ile	Lys	Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	260	265	270
Val	Gly	Ser	Asp	Gln	Glu	Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	275	280	285
Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	290	295	300
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln	305	310	315
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu	320	325	330
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val	Pro	Asn	Met	Leu	Gly	335	340	345
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu	350	355	360
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro	365	370	375
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys	380	385	390
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	395	400	405

Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser
 410 415
 Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu
 425 430 435
 Tyr Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val
 440 445 450
 Ser Ile Ser Tyr Val Val Tyr Glu Asn Leu Lys Ile Thr Leu Gly
 455 460 465
 Val Gln Ser Arg

<210> 290
 <211> 1658
 <212> DNA
 <213> Homo sapiens

<400> 290
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 ttccccagcc atggccttccc tggggcagat cctcttcttg agcataatta 100
 gcatcatcat tattctggct ggagcaattg cactcatcat tggctttggt 150
 atttcaggga gacactccat cacagtcaact actgtcgcct cagctgggaa 200
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250
 ttctgatat cgtgatacaa tggctgaagg aagtggtttt aggcttggtc 300
 catgagttca aagaaggcaa agatgagctg tcggagcagg atgaaatgtt 350
 cagaggccgg acagcagtgt ttgctgatca agtgatagtt ggcaatgcct 400
 ctttgccgct gaaaaacgtg caactcacag atgctggcac ctacaaatgt 450
 tatatcatca ctcttaaagg caaggggaat gtaaccttg agtataaac 500
 tggagccttc agcatgccgg aagtgaatgt ggactataat gccagctcag 550
 agaccttgcg gtgtgaggct ccccgatggt tccccagcc cacagtggtc 600
 tgggcatccc aagttgacca gggagccaac ttctcggaag tctccaatac 650
 cagcttttag ctgaactctg agaatgtgac catgaaggtt gtgtctgtgc 700
 tctacaatgt tacgatcaac aacacatact cctgtatgat tgaatatgac 750
 attgccaaag caacagggga tatcaaagt acagaatcgg agatcaaaaag 800
 gcgaggtcac ctacagctgc taaactcaaa ggcttctctg tgtgtctctt 850
 ctttctttgc catcagctgg gcacttctgc ctctcagccc ttacctgatg 900
 ctaaaataat gtgccttggc caaaaaaaag catgcaaagt cattgttaca 950
 acagggatct acagaactat ttcaccacca gatatgacct agttttatat 1000
 ttctgggagg aaatgaattc atatctagaa gtctggagtg agcaaacaag 1050

agcaagaaac aaaaagaagc caaaagcaga aggctccaat atgaacaaga 1100
 taaatctatc ttcaagaca tattagaagt tgggaaaata attcatgtga 1150
 actagacaag tgtgttaaga gtgataagta aaatgcacgt ggagacaagt 1200
 gcatcccag atctcaggga cctcccctg cctgtcacct ggggagtgag 1250
 aggacaggat agtgcattgt ctttgtctct gaatttttag ttatatgtgc 1300
 tgtaatgttg ctotgaggaa gcccttgaa agtctatccc aacatatcca 1350
 catcttatat tccacaaatt aagctgtagt atgtacccta agacgctgct 1400
 aattgactgc cacttcgcaa ctcaggggag gctgcatttt agtaatgggt 1450
 caaatgatgc actttttatg atgcttccaa aggtgccttg gcttctcttc 1500
 ccaactgaca aatgccaaag ttgagaaaaa tgatcataat tttagcataa 1550
 acagagcagt cggggacacc gattttataa ataaactgag caccttcttt 1600
 ttaacaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650
 aaaaaaaa 1658

<210> 291
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 291
 Met Ala Ser Leu Gly Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile
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 20 25 30
 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala
 35 40 45
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro
 50 55 60
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly
 65 70 75
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu
 80 85 90
 Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala
 95 100 105
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val
 110 115 120
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser
 125 130 135
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe
 140 145 150
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr

	155		160		165
Leu Arg Cys Glu	Ala Pro Arg Trp Phe	Pro Gln Pro Thr Val			
	170	175		180	
Trp Ala Ser Gln	Val Asp Gln Gly Ala	Asn Phe Ser Glu Val Ser			
	185	190		195	
Asn Thr Ser Phe	Glu Leu Asn Ser Glu	Asn Val Thr Met Lys Val			
	200	205		210	
Val Ser Val Leu	Tyr Asn Val Thr Ile	Asn Asn Thr Tyr Ser Cys			
	215	220		225	
Met Ile Glu Asn	Asp Ile Ala Lys Ala	Thr Gly Asp Ile Lys Val			
	230	235		240	
Thr Glu Ser Glu	Ile Lys Arg Arg Ser	His Leu Gln Leu Leu Asn			
	245	250		255	
Ser Lys Ala Ser	Leu Cys Val Ser Ser	Phe Phe Ala Ile Ser Trp			
	260	265		270	
Ala Leu Leu Pro	Leu Ser Pro Tyr Leu	Met Leu Lys			
	275	280			

<210> 292
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 292
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 tgaagcgggc ctccgccggc ctgcagcggg ttcattgagcc gacctgggcc 150
 cagcagttgc tacaggagat gaagaccctc tcttgaata ctgagtacct 200
 gatgcccttt ctcccaacc agtgtggatc ccttctctat tacctcacct 250
 tggcatcgac agatctgacc ctggctgtgc ccattgttaa ctctctggct 300
 atcatcttca cactgattgt tgggaaggcc cttggagaag atattggtgg 350
 aaaacgtaag ttagactact gcgagtgcgg gacgcagctc tgtggacttc 400
 gacatacctg tgtagttcc ttcccagaac ccattcctcc agagtgggtg 450
 aggacacggc cttttcccat cctgcccttt cctctgcagc tgttttgctt 500
 ccttctggcc atcagagttc cctccctctg gacagctctg agaagacag 550
 aggctggggt ttgggattga agaccagacc ccattctgagc ccttctccca 600
 gccctgtacc agctcctact ggcattgctg agctcagacc ctctgtattt 650
 ctgcctatta tcccaggagc agttgctggc atgggtgctc ccgtgatagg 700
 aatttcactc tgcatacaaa gctcagtgag taagaccagc gggcaacagt 750
 ctaccctttg agtgggccga acccaacttc agctctgctg cctccaggaa 800

gccctctgggc catgaagtgc tggcagtgc cggatggacc tagcacttcc 850
 cctctctggc cttagcttcc tctctcttta tggggataac agctacctca 900
 tggatcacaa taagagaaca agagtgaag agttttgtaa ccttcaagtg 950
 ctgttcagct gcggggattt agcacaggag actctacgct caccctcagc 1000
 aacctttctg cccacagcgc tctcttctg ctaacatctc aggcctccag 1050
 cccagccacc attactgtgg cctgatctgg actatcatgg tggcagggtc 1100
 catggactgc agaactccag ctgcatggaa agggccagct gcagactttg 1150
 agccagaaat gcaaacggga ggcctctggg actcagtcag agcgttttg 1200
 ctgaatgagg ggtggaaccg agggaagaag gtgcgtcgga gtggcagatg 1250
 caggaaatga gctgtctatt agccttgctt gcccaccca tgaggtagtc 1300
 agaaatcctc actgccagcc cctcttaaac aggtagagag ctgtgagccc 1350
 cagccccacc tgaactccagc acacctggcg agtagtagct gtcaataaat 1400
 ctatgtaaac agacaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1450
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1484

<210> 293
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 293
 Met Ala Ala Ser Leu Gly Gln Val Leu Ala Leu Val Leu Val Ala
 1 5 10 15
 Ala Leu Trp Gly Gly Thr Gln Pro Leu Leu Lys Arg Ala Ser Ala
 20 25 30
 Gly Leu Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu
 35 40 45
 Gln Glu Met Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro
 50 55 60
 Phe Leu Leu Asn Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu
 65 70 75
 Ala Ser Thr Asp Leu Thr Leu Ala Val Pro Ile Cys Asn Ser Leu
 80 85 90
 Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp
 95 100 105
 Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln
 110 115 120
 Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro
 125 130 135
 Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro
 140 145 150

Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro
155 160 165

Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp
170 175 180

<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

cttctgtagg acagtcacca gccagatcc agaagcctct ctaggctcca 50
gctttctctg tggaagatga cagcaattat agcaggagccc tgcaggctg 100
tcgaaaagat tccgcaataa aactttgcc a gtgggaagta cctagtga aa 150
cggcctaaga tgccacttct tctcatgtcc caggcttgag gccctgtggt 200
ccccatcctt gggagaagtc agctccagca ccatgaaggg catcctcggt 250
gctggtatca ctgcagtgtc tgttcagct gtagaatctc tgagctgcgt 300
gcagtgtaat tcatgggaaa aatcctgtgt caacagcatt gcctctgaat 350
gtccctcaca tgccaacacc agctgtatca gctcctcagc cagctcctct 400
ctagagacac cagtcagatt ataccagaat atgttctgct cagcggagaa 450
ctgcagtgag gagacacaca ttacagcctt cactgtccac gtgtctgctg 500
aagaacactt tcattttgta agccagtgtc gccaaaggaaa ggaatgcagc 550
aacaccagcg atgccctgga ccctccctg aagaacgtgt ccagcaacgc 600
agagtgcctt gcttgttatg aatctaattg aacttcctgt cgtgggaagc 650
cctggaaatg ctatgaagaa gaacagtgtg tcttctagt tgcagaaactt 700
aagaatgaca ttgagtctaa gagtctctg ctgaaaggct gttccaacgt 750
cagtaacgcc acctgtcagt tcctgtctg tgaaaaacaag actcttgag 800
gagtcatctt tcgaaagttt gagtgtgcaa atgtaaacag cttaaccccc 850
acgtctgcac caaccacttc ccacaacgtg ggctccaaag cttccctcta 900
cctcttgccc cttgccagcc tccttctctg gggactgtg ccctgaggct 950
ctgggctgc actttgccca gcacccatt tctgcttctc tgaggctccag 1000
agcaccacct gcggtgtgta caccctcttt cctgtctctg ccgcgtttaa 1050
ctgccagta agtgggagtc acaggtctcc aggcaatgcc gacagctgcc 1100
ttgttcttca ttattaaagc actggttcat tcaactgccaa aaaaaaaaaa 1150
aaaaaaaaaa aaaa 1164

<210> 295

<211> 237

<212> PRT

<213> Homo sapiens

<400> 295

Met Lys Gly Ile Leu Val Ala Gly Ile Thr Ala Val Leu Val Ala
1 5 10 15
Ala Val Glu Ser Leu Ser Cys Val Gln Cys Asn Ser Trp Glu Lys
20 25 30
Ser Cys Val Asn Ser Ile Ala Ser Glu Cys Pro Ser His Ala Asn
35 40 45
Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro
50 55 60
Val Arg Leu Tyr Gln Asn Met Phe Cys Ser Ala Glu Asn Cys Ser
65 70 75
Glu Glu Thr His Ile Thr Ala Phe Thr Val His Val Ser Ala Glu
80 85 90
Glu His Phe His Phe Val Ser Gln Cys Cys Gln Gly Lys Glu Cys
95 100 105
Ser Asn Thr Ser Asp Ala Leu Asp Pro Pro Leu Lys Asn Val Ser
110 115 120
Ser Asn Ala Glu Cys Pro Ala Cys Tyr Glu Ser Asn Gly Thr Ser
125 130 135
Cys Arg Gly Lys Pro Trp Lys Cys Tyr Glu Glu Glu Gln Cys Val
140 145 150
Phe Leu Val Ala Glu Leu Lys Asn Asp Ile Glu Ser Lys Ser Leu
155 160 165
Val Leu Lys Gly Cys Ser Asn Val Ser Asn Ala Thr Cys Gln Phe
170 175 180
Leu Ser Gly Glu Asn Lys Thr Leu Gly Gly Val Ile Phe Arg Lys
185 190 195
Phe Glu Cys Ala Asn Val Asn Ser Leu Thr Pro Thr Ser Ala Pro
200 205 210
Thr Thr Ser His Asn Val Gly Ser Lys Ala Ser Leu Tyr Leu Leu
215 220 225
Ala Leu Ala Ser Leu Leu Arg Gly Leu Leu Pro
230 235

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

ggcctcggtt caaacgaccc ggtgggtcta cagcggaagg gagggagcga 50
aggtaggagg cagggtctgc ctactggcc accctcccaa cccaagagc 100
ccagcccat ggtccccgcc gccggcgcgc tgctgtgggt cctgtgtgtg 150

aatctgggtc cccggcggc gggggcccaa ggcctgacct agactccgac 200
cgaaatgcag cgggtcagtt tacgctttgg gggcccatg acccgagct 250
accggagcac cggccgact ggtcttcccc ggaagacaag gataatccta 300
gaggacgaga atgatgccat ggccgacgcc gaccgcctgg ctggaccagc 350
ggctgcccag ctcttggccg ccacgggtgc caccggcttt agccggctgt 400
ccgccattaa cgaggaggat ggggtctcag aagaggggggt tgtgattaat 450
gccggaagg atagcaccag cagagagctt cccagtgcga ctcccaatac 500
agcggggagt tccagcacga ggtttatagc caatagtcag gagcctgaaa 550
tcaggctgac ttcaagcctg ccgcgctccc ccgggaggtc tactgaggac 600
ctgccaggct cgcaggccac cctgagccag tggctccacac ctgggtctac 650
cccgagccgg tggccgtcac cctcaccac agccatgcca tctcctgagg 700
atctgcggct ggtgctgatg ccctggggcc cgtggcactg ccaactgcaa 750
tcgggcacca tgagccggag ccggtctggg aagctgcacg gcctttccgg 800
gcgccttcga gttggggcgc tgagccagct ccgcacggag cacaagcctt 850
gcacctatca acaatgtccc tgcaaccgac ttccgggaaga gtgccccctg 900
gacacaagtc tetgtactga caccaactgt gcctctcaga gcaccaccag 950
taccaggacc accactaccc ccttcccac catccacctc agaagcagtc 1000
ccagcctgcc acccgccagc ccctgcccag ccctggcttt ttggaacg 1050
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agagatgcaa ccaatagaca gaaaccagag gtaatggcca cttcatccac 1150
atgaggagat gtcagtatct caacctctt tgccctttca atcctagcac 1200
ccactagata tttttagtac agaaaaacaa aactggaaaa cacia 1245

<210> 297
<211> 341
<212> PRT
<213> Homo sapiens

<400> 297
Met Val Pro Ala Ala Gly Ala Leu Leu Trp Val Leu Leu Leu Asn
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Leu Gly Pro Arg Ala Ala Gly Ala Gln Gly Leu Thr Gln Thr Pro
20 25 30
Thr Glu Met Gln Arg Val Ser Leu Arg Phe Gly Gly Pro Met Thr
35 40 45
Arg Ser Tyr Arg Ser Thr Ala Arg Thr Gly Leu Pro Arg Lys Thr
50 55 60
Arg Ile Ile Leu Glu Asp Glu Asn Asp Ala Met Ala Asp Ala Asp

	65	70	75
Arg Leu Ala Gly	Pro Ala Ala Ala Glu	Leu Leu Ala Ala Thr	Val
	80	85	90
Ser Thr Gly Phe	Ser Arg Ser Ser Ala	Ile Asn Glu Glu Asp	Gly
	95	100	105
Ser Ser Glu Glu	Gly Val Val Ile Asn	Ala Gly Lys Asp Ser	Thr
	110	115	120
Ser Arg Glu Leu	Pro Ser Ala Thr Pro	Asn Thr Ala Gly Ser	Ser
	125	130	135
Ser Thr Arg Phe	Ile Ala Asn Ser Gln	Glu Pro Glu Ile Arg	Leu
	140	145	150
Thr Ser Ser Leu	Pro Arg Ser Pro Gly	Arg Ser Thr Glu Asp	Leu
	155	160	165
Pro Gly Ser Gln	Ala Thr Leu Ser Gln	Trp Ser Thr Pro Gly	Ser
	170	175	180
Thr Pro Ser Arg	Trp Pro Ser Pro Ser	Pro Thr Ala Met Pro	Ser
	185	190	195
Pro Glu Asp Leu	Arg Leu Val Leu Met	Pro Trp Gly Pro Trp	His
	200	205	210
Cys His Cys Lys	Ser Gly Thr Met Ser	Arg Ser Arg Ser Gly	Lys
	215	220	225
Leu His Gly Leu	Ser Gly Arg Leu Arg	Val Gly Ala Leu Ser	Gln
	230	235	240
Leu Arg Thr Glu	His Lys Pro Cys Thr	Tyr Gln Gln Cys Pro	Cys
	245	250	255
Asn Arg Leu Arg	Glu Glu Cys Pro Leu	Asp Thr Ser Leu Cys	Thr
	260	265	270
Asp Thr Asn Cys	Ala Ser Gln Ser Thr	Thr Ser Thr Arg Thr	Thr
	275	280	285
Thr Thr Pro Phe	Pro Thr Ile His Leu	Arg Ser Ser Pro Ser	Leu
	290	295	300
Pro Pro Ala Ser	Pro Cys Pro Ala Leu	Ala Phe Trp Lys Arg	Val
	305	310	315
Arg Ile Gly Leu	Glu Asp Ile Trp Asn	Ser Leu Ser Ser Val	Phe
	320	325	330
Thr Glu Met Gln	Pro Ile Asp Arg Asn	Gln Arg	
	335	340	

<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

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 cgacctgag ccggtgtacc gcgactgcgt actgcagtgc gaagagcaga 150
 actgctctgg gggcgctctg aatcacttcc gctcccgcca gccaatctac 200
 atgagtctag caggctggac ctgtcgggac gactgtaagt atgagtgtat 250
 gtgggtcacc gttgggctct acctccagga aggtcacaaa gtgcctcagt 300
 tccatggcaa gtggcccttc tccgggttcc tgttctttca agagccggca 350
 tggccgtgg cctcgtttct caatggcctg gccagcctgg tgatgtctctg 400
 ccgctaccgc accttcgtgc cagcctcctc ccccatgtac cacacctgtg 450
 tggccttcgc ctgggtgtcc ctcaatgcac ggttctggtc cacagtcttc 500
 cacaccaggg acactgacct cacagagaaa atggactact tctgtgcctc 550
 cactgtcacc ctacactcaa tctacctgtg ctgcgtcagg accgtggggc 600
 tgacgacccc agctgtggtc agtgccttcc gggctctcct gctgctcagt 650
 ctgacctgc acgtctccta cctgagcctc atccgcttcg actatggcta 700
 caacctgggt gccaacgtgg ctattggcct ggtcaacgtg gtgtggtggc 750
 tggcctgggt cctgtggaac cagcggcggc tgccctcact gcgcaagtgc 800
 gtggtgggtg tcttctgctc gcaggggctg tccctgctcg agctgcttga 850
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 ttggacatga aggatgtggg ccagaaatca tgtggccagc ccaccccttg 1150
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 ggaaatgagt gtgttcttag ctctaccggg aggacagctg cctgtttcct 1300
 ccccaccagc ctctcccca catcccagc tgctgtgctg ggtcctgaag 1350
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 ggtcccttc tgttaccacc cccaccctc ctccaggaca ccactagggt 1450
 gtgctggatg ctgtttcttt ggccagccaa ggttcacggc gattctcccc 1500
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ttgagagcct gccaccgtgt gtcgggagtg tgggccaggc tgagtgcata 1700
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 tgcgcgtgct ggtgggcatg tgagatgagt gactgccgtg gaatgtgtcc 1900
 acagttgaga ggttgagca ggaatgagga atcctgtcac catcaataat 1950
 cacttgtgga gcgccagctc tgcccaagac gccacctggg cggaacagca 2000
 ggagctctcc atggccaggc tgccctgtgt catgttccct gtctggtgcc 2050
 cctttgccc cctcctgcaa acctcacagg gtccccacac aacagtcccc 2100
 tccagaagca gccctcggg ggcagaggaa ggaaaaatgg gatggctggg 2150
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 tggggaggag gaagggcgga tttgaggag aaggggagaa agcttatggc 2300
 tgggtctggt ttcttccct cccagagggt cttactgttc cagggtgccc 2350
 ccagggcagg cagggggcac actatgcctg tgccctggta aaggtgacc 2400
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<210> 299
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 299
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 Asp Cys Val Leu Gln Cys Glu Glu Gln Asn Cys Ser Gly Gly Ala
 35 40 45
 Leu Asn His Phe Arg Ser Arg Gln Pro Ile Tyr Met Ser Leu Ala
 50 55 60
 Gly Trp Thr Cys Arg Asp Asp Cys Lys Tyr Glu Cys Met Trp Val
 65 70 75

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 gcagaccacaa agaaacggag agaaaagaaa ccaaagccga ggaggagctg 250
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 tcagccaggg caggctgtcc ctgcaggatc ccacgtacgg ctgaatcttc 350
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 aatttgaaa gcaaaaggct ggatatcaac accaacacct acacatctca 450
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 gttcaaagga agacaaggca aggcaggctg aggtaaagcg gctcttcgcg 550
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<210> 301

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301

Met	Ala	Pro	Gln	Ser	Leu	Pro	Ser	Ser	Arg	Met	Ala	Pro	Leu	Gly	1	5	10	15
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Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	170	175	180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	185	190	195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	200	205	210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	215	220	225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	230	235	240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	245	250	255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	260	265	270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	275	280	285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe				

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gtgagctggc cactccagag ctgcagtgcc actggaggag tcagactacc 1900
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tgtggggagg gggggagggt tttctataaa ctgtatcatt tctcgtgtg 2000
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2136

<210> 303
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303
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 Pro Ala Phe Ala Leu Phe Leu Ile Thr Val Ala Gly Asp Pro Leu
 20 25 30
 Arg Val Ile Ile Leu Val Ala Gly Ala Phe Phe Trp Leu Val Ser
 35 40 45
 Leu Leu Leu Ala Ser Val Val Trp Phe Ile Leu Val His Val Thr
 50 55 60
 Asp Arg Ser Asp Ala Arg Leu Gln Tyr Gly Leu Leu Ile Phe Gly
 65 70 75
 Ala Ala Val Ser Val Leu Leu Gln Glu Val Phe Arg Phe Ala Tyr
 80 85 90
 Tyr Lys Leu Leu Lys Lys Ala Asp Glu Gly Leu Ala Ser Leu Ser
 95 100 105
 Glu Asp Gly Arg Ser Pro Ile Ser Ile Arg Gln Met Ala Tyr Val
 110 115 120
 Ser Gly Leu Ser Phe Gly Ile Ile Ser Gly Val Phe Ser Val Ile
 125 130 135
 Asn Ile Leu Ala Asp Ala Leu Gly Pro Gly Val Val Gly Ile His
 140 145 150
 Gly Asp Ser Pro Tyr Tyr Phe Leu Thr Ser Ala Phe Leu Thr Ala
 155 160 165
 Ala Ile Ile Leu Leu His Thr Phe Trp Gly Val Val Phe Phe Asp
 170 175 180
 Ala Cys Glu Arg Arg Arg Tyr Trp Ala Leu Gly Leu Val Val Gly
 185 190 195
 Ser His Leu Leu Thr Ser Gly Leu Thr Phe Leu Asn Pro Trp Tyr
 200 205 210
 Glu Ala Ser Leu Leu Pro Ile Tyr Ala Val Thr Val Ser Met Gly
 215 220 225
 Leu Trp Ala Phe Ile Thr Ala Gly Gly Ser Leu Arg Ser Ile Gln
 230 235 240
 Arg Ser Leu Leu Cys Lys Asp
 245

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
<222> 108, 123, 126, 154, 198, 206, 217
<223> unknown base

<400> 304
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aagatacaacc catttccatt ccgcagatg gcctatgttt ctggtctctc 100
ccttcggnat catcagtggg gtntntctg ttatcaatat ttggctgat 150
gcanttgggc caggtgtggg tgggatccat ggagactcac cotattantt 200
cctganttca gccttntga cagcagccat tatcctgctc 240

<210> 305
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
<223> unknown base

<400> 305
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ctgcttaaga aggcagatga ggggttagca tngctgagtg aggacggaag 150
atcacccatt tccatccgcc agatggccta tgttnttggt nttccttg 200
gtatcatcag tgggttttn tctgttatca atattttggn tgatgcantt 250
gggccaggtg tggttgggat ccatggagan tcacctatt aattcctgaa 300
ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350
ttgtgttttt tgatgctgtg gagaggag 378

<210> 306
<211> 655
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1, 22, 129, 133, 184
<223> unknown base

<400> 306
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gctgtgccac cccacgcgga cccccagnt gngcgccct tccattttgc 150
ctgtcctggt caggccccca ccccccttcc caantgacca gccatggggg 200
ctgcggtggt tttcggctgc actttcgtcg cgttcgggcc ggccttcgcg 250

ctttttcttga tcaactgtggc tggggaccog cttcgcgtta tcaatcctggt 300
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 ggttcacattt ggtccatgtg accgaccggg cagatgcocg gctccagtac 400
 ggccctctga tttttggtgc tgctgtctct gtccttctac aggaggtgtt 450
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag ggttagcat 500
 cgtcgtagtga ggacggaaga tcaacctctt ccatccgcc gatggcctat 550
 gtttctggtc tctccttcgg tatcatcagt ggtgtcttct ctgttatcaa 600
 tattttggtc gatgcacttg ggccaggtgt ggttgggac catggagact 650
 ccccc 655

<210> 307
 <211> 650
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 52, 89, 128
 <223> unknown base

<400> 307
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 cnttccccgg ggtctggggg tgacattgca ccgcgccctt cgtggggctg 100
 cgttgccacc ccacccggac tccccagntg gcgcgccctt cccatttgcc 150
 tgctcgtggtc agggcccccac ccccttccc acctgaccag ccatgggggc 200
 tgcgggtgttt ttccgggtgc actttcgtcg cgttcgggcc cggccttcgc 250
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 tcgctgagtg aggaacggaag atcaacctc tccatccgcc agatggccta 550
 tgtttctggt ctctccttcg gtatcatcag tgggtgtctc tctgttatca 600
 atattttggt tgatgcactt ggccaggtg tggttgggat ccatggagac 650

<210> 308
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 308
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ctggtgaggg tggtctagca ggcagggaag gagaggtgtc tgtgctgcct 200
gcacccacat ctttctctgt cccctccttg cctgtcttgg aggtctctag 250
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ctgagaagtg gaaaaaaaa 1570

<210> 309

<211> 293
 <212> PRT
 <213> Homo sapiens

<400> 309
 Met Ala Thr Ala Arg Pro Pro Trp Met Trp Val Leu Cys Ala Leu
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 Ile Thr Ala Leu Leu Leu Gly Val Thr Glu His Val Leu Ala Asn
 20 25 30
 Asn Asp Val Ser Ser Cys Asp His Pro Ser Asn Thr Val Pro Ser Gly
 35 40 45
 Ser Asn Gln Asp Leu Gly Ala Gly Ala Gly Glu Asp Ala Arg Ser
 50 55 60
 Asp Asp Ser Ser Ser Arg Ile Ile Asn Gly Ser Asp Cys Asp Met
 65 70 75
 His Thr Gln Pro Trp Gln Ala Ala Leu Leu Leu Arg Pro Asn Gln
 80 85 90
 Leu Tyr Cys Gly Ala Val Leu Val His Pro Gln Trp Leu Leu Thr
 95 100 105
 Ala Ala His Cys Arg Lys Lys Val Phe Arg Val Arg Leu Gly His
 110 115 120
 Tyr Ser Leu Ser Pro Val Tyr Glu Ser Gly Gln Gln Met Phe Gln
 125 130 135
 Gly Val Lys Ser Ile Pro His Pro Gly Tyr Ser His Pro Gly His
 140 145 150
 Ser Asn Asp Leu Met Leu Ile Lys Leu Asn Arg Arg Ile Arg Pro
 155 160 165
 Thr Lys Asp Val Arg Pro Ile Asn Val Ser Ser His Cys Pro Ser
 170 175 180
 Ala Gly Thr Lys Cys Leu Val Ser Gly Trp Gly Thr Thr Lys Ser
 185 190 195
 Pro Gln Val His Phe Pro Lys Val Leu Gln Cys Leu Asn Ile Ser
 200 205 210
 Val Leu Ser Gln Lys Arg Cys Glu Asp Ala Tyr Pro Arg Gln Ile
 215 220 225
 Asp Asp Thr Met Phe Cys Ala Gly Asp Lys Ala Gly Arg Asp Ser
 230 235 240
 Cys Gln Gly Asp Ser Gly Gly Pro Val Val Cys Asn Gly Ser Leu
 245 250 255
 Gln Gly Leu Val Ser Trp Gly Asp Tyr Pro Cys Ala Arg Pro Asn
 260 265 270
 Arg Pro Gly Val Tyr Thr Asn Leu Cys Lys Phe Thr Lys Trp Ile
 275 280 285
 Gln Glu Thr Ile Gln Ala Asn Ser

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
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<210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
 ctggaacatc tgctgcccag attc 24

<210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
 gtcggatgac agcagcagcc gcatactcaa tggatccgac tgcgatatgc 50

<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
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 ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100
 ccgtgctgct ggccttggt gtgctgtggt ctgtagctgt caccggtgcc 150
 gtgctcttcc tgaaccacgc ccacgcgccg ggcacggcgc cccacactgt 200
 cgtcagcact ggggctgccca gcgccaacag cgccttggtc actgtggaaa 250
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 ggaccacgc tccaaggctg agaccagttc cctggaggcc acccaacctg 2050
 tgccccggca ggccgtgggt ctgcagtcc cttacctgct gtgcccactc 2100
 gctctctgtc tcaaatgagg cccaacccat cccccacca gctccggccc 2150

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
 425 430
 Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
 440 445 450
 Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
 455 460

<210> 315
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 315
 cacacgtcca acotcaatgg gcag 24

<210> 316
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 316
 gaccagcagg gccaaggaca agg 23

<210> 317
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 317
 gttctctgag atgaagatcc ggccggtccg ggagtaccgc ttag 44

<210> 318
 <211> 1841
 <212> DNA
 <213> Homo sapiens

<400> 318
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 ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200
 atgagcctgc attctcaagc ctctgccaca actoggcato cagagccccg 250
 gcgcacagag cacagggctc cctcttcaac gtggcgacca gtggccctga 300
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 actgaagatt taataataat aaatgtaaat actgtgaaaa a 1841

<210> 319
 <211> 280
 <212> PRT
 <213> Homo sapiens

<220>

<223> Synthetic oligonucleotide probe

<400> 324

atgctggtatg atgatgggga caccacatg agcctgcatt 40

<210> 325

<211> 2988

<212> DNA

<213> Homo sapiens

<400> 325

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gagggagcgg gcccgcccgc ggggcccag cctccggat ccgcccctc 150
cccggtccg cccctcggga gactcctctg gctgctctgg gggttcgcgg 200
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<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

Met	Arg	Ala	Ser	Leu	Leu	Ser	Val	Leu	Arg	Pro	Ala	Gly	Pro
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			20					25				30	
Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Gln	Pro
			35					40				45	
Gly	Asp	Ser	Glu	Leu	Pro	Pro	Arg	Gly	Asn	Thr	Asn	Ala	Ala
			50					55				60	
Arg	Pro	Asn	Ser	Val	Gln	Pro	Gly	Ala	Glu	Arg	Glu	Lys	Pro
			65					70				75	
Ala	Gly	Glu	Gly	Ala	Gly	Glu	Asn	Trp	Glu	Pro	Arg	Val	Leu
			80					85				90	
Tyr	His	Pro	Ala	Gln	Pro	Gly	Gln	Ala	Ala	Lys	Lys	Ala	Val
			95					100				105	
Thr	Arg	Tyr	Ile	Ser	Thr	Glu	Leu	Gly	Ile	Arg	Gln	Arg	Leu
			110					115				120	
Val	Ala	Val	Leu	Thr	Ser	Gln	Thr	Thr	Leu	Pro	Thr	Leu	Gly
			125					130				135	
Ala	Val	Asn	Arg	Thr	Leu	Gly	His	Arg	Leu	Glu	Arg	Val	Val
			140					145				150	
Leu	Thr	Gly	Ala	Arg	Gly	Arg	Arg	Ala	Pro	Pro	Gly	Met	Ala
			155					160				165	
Val	Thr	Leu	Gly	Glu	Glu	Arg	Pro	Ile	Gly	His	Leu	His	Leu
			170					175				180	
Leu	Arg	His	Leu	Leu	Glu	Gln	His	Gly	Asp	Asp	Phe	Asp	Trp
			185					190				195	
Phe	Leu	Val	Pro	Asp	Thr	Thr	Tyr	Thr	Glu	Ala	His	Gly	Leu
			200					205				210	
Arg	Leu	Thr	Gly	His	Leu	Ser	Leu	Ala	Ser	Ala	Ala	His	Leu
			215					220				225	
Leu	Gly	Arg	Pro	Gln	Asp	Phe	Ile	Gly	Gly	Glu	Pro	Thr	Pro
			230					235				240	
Arg	Tyr	Cys	His	Gly	Gly	Phe	Gly	Val	Leu	Leu	Ser	Arg	Met
			245					250				255	
Leu	Gln	Gln	Leu	Arg	Pro	His	Leu	Glu	Gly	Cys	Arg	Asn	Asp
			260					265				270	

Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp	Leu
	590	595	600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala	Gly
	605	610	615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg	Met
	620	625	630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe	Gln
	635	640	645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro	Pro
	650	655	660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala	Ser
	665	670	675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly	Arg
	680	685	690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser	Leu
	695	700	705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val	Leu
	710	715	720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln	Thr
	725	730	735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu	Gln
	740	745	750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met	Leu
	755	760	765
Leu Phe Glu Gln	Gln Gln Gly Asn Ser	Thr	
	770	775	

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg cgcgaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgatgttctg 20

<210> 329

<211> 20

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 329
 atggctcagt gtgcagacag 20

 <210> 330
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 330
 gcatgctgct cctgaagta gtcc 24

 <210> 331
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 331
 atgcatggga aagaaggcct gcc 24

 <210> 332
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 332
 tgcactggtg accacgaggg ggtgcactat agccatctgg agctgag 47

 <210> 333
 <211> 1095
 <212> DNA
 <213> Homo sapiens

 <400> 333
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 gctcctctg attggaagc gctggccacc tocccacacc ccttgcaac 100
 gctccctag tggagaaaag gagtagctat tagccaatto ggcagggcc 150
 gctttttaga agcttgattt cctttgaaga tgaagaacta gcggaagctc 200
 tgctctttc cccagtgggc gagggaactc ggggcgattg gctgggaact 250
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 ccataataa gaaatttctc agcctggccg aaaatgggtg gccccacgaa 350
 gccacgacaa ctggaggcaa agagggttc tcaacgcccc gcctcattgg 400

aaaacaaat cagatctggg acctatatag cgtggcggag gcgggcgcat 450
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ccgcccccta gacctgcag caccatctgt catggcggtt gggctgtttg 550
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<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

Met	Ala	Ala	Gly	Leu	Phe	Gly	Leu	Ser	Ala	Arg	Arg	Leu	Leu	Ala
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Ala	Ala	Ala	Thr	Arg	Gly	Leu	Pro	Ala	Ala	Arg	Val	Arg	Trp	Glu
			20						25					30
Ser	Ser	Phe	Ser	Arg	Thr	Val	Val	Ala	Pro	Ser	Ala	Val	Ala	Gly
			35						40					45
Lys	Arg	Pro	Pro	Glu	Pro	Thr	Thr	Pro	Trp	Gln	Glu	Asp	Pro	Glu
				50					55					60
Pro	Glu	Asp	Glu	Asn	Leu	Tyr	Glu	Lys	Asn	Pro	Asp	Ser	His	Gly
				65					70					75
Tyr	Asp	Lys	Asp	Pro	Val	Leu	Asp	Val	Trp	Asn	Met	Arg	Leu	Val
				80					85					90
Phe	Phe	Phe	Gly	Val	Ser	Ile	Ile	Leu	Val	Leu	Gly	Ser	Thr	Phe
				95					100					105
Val	Ala	Tyr	Leu	Pro	Asp	Tyr	Arg	Met	Lys	Glu	Trp	Ser	Arg	Arg
				110					115					120
Glu	Ala	Glu	Arg	Leu	Val	Lys	Tyr	Arg	Glu	Ala	Asn	Gly	Leu	Pro
				125					130					135
Ile	Met	Glu	Ser	Asn	Cys	Phe	Asp	Pro	Ser	Lys	Ile	Gln	Leu	Pro
				140					145					150

Glu Asp Glu

<210> 335
<211> 442
<212> DNA
<213> Homo sapiens

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<210> 336
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 336
ctgagaccct gcagcaccat ctg 23

<210> 337
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 337
ggtgttttt gagccccact tagc 24

<210> 338
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 338
aatctagctt ctccaggact gtggtcgccc cgtccgctgt 40

<210> 339
<211> 2162
<212> DNA

<213> Homo sapiens

<400> 339
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<210> 340
<211> 574
<212> PRT
<213> Homo sapiens

<400> 340
Met Pro Leu Ala Leu Leu Val Leu Leu Leu Gly Pro Gly Gly
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Trp Cys Leu Ala Glu Pro Pro Arg Asp Ser Leu Arg Glu Glu Leu
20 25 30
Val Ile Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln
35 40 45
Phe Arg Thr Arg Trp Asp Ser Glu Leu Gln Arg Glu Gly Val Ser
50 55 60
His Tyr Arg Leu Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys
65 70 75
Tyr Ser Leu Arg Glu Leu His Leu Ser Phe Thr Gln Gly Phe Trp
80 85 90
Arg Thr Arg Tyr Trp Gly Pro Pro Phe Leu Gln Ala Pro Ser Gly
95 100 105
Ala Glu Leu Trp Val Trp Phe Gln Asp Thr Val Thr Asp Val Asp
110 115 120
Lys Ser Trp Lys Glu Leu Ser Asn Val Leu Ser Gly Ile Phe Cys
125 130 135
Ala Ser Leu Asn Phe Ile Asp Ser Thr Asn Thr Val Thr Pro Thr
140 145 150

Val Leu Ser Ala	Leu Val Pro Ser Met	Val Ala Ala Lys Pro Val
470	475	480
Asp Trp Glu Glu	Ser Pro Leu Phe Asn	Ser Leu Phe Pro Val Ser
485	490	495
Asp Gly Ser Asn	Tyr Phe Val Arg Leu	Tyr Thr Glu Pro Leu Leu
500	505	510
Val Asn Leu Pro	Thr Pro Asp Phe Ser	Met Pro Tyr Asn Val Ile
515	520	525
Cys Leu Thr Cys	Thr Val Val Ala Val	Cys Tyr Gly Ser Phe Tyr
530	535	540
Asn Leu Leu Thr	Arg Thr Phe His Ile	Glu Glu Pro Arg Thr Gly
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Gly Leu Ala Lys	Arg Leu Ala Asn Leu	Ile Arg Arg Ala Arg Gly
560	565	570
Val Pro Pro Leu		

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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 341
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<210> 342
 <211> 24
 <212> DNA
 <213> Artificial Sequence

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<210> 344
 <211> 762
 <212> DNA
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<210> 345
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 <213> Homo sapiens

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 35 40 45
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys
 50 55 60
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys
 65 70 75
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro
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 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser
 95 100 105
 Thr Arg Cys Pro Gln Lys
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<210> 346
 <211> 2528
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 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His
 50 55 60
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala
 65 70 75
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp
 80 85 90
 Lys

<210> 350
 <211> 1141
 <212> DNA
 <213> Homo sapiens

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<210> 351
 <211> 197
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Asn Cys Glu Phe Phe Thr Phe Cys Cys Gly Thr Cys Tyr His Arg
 50 55 60
 Tyr Cys Cys Arg Asp Leu Thr Leu Leu Ile Thr Glu Arg Gln Gln
 65 70 75
 Lys His Cys Leu Ala Phe Ser Pro Lys Thr Ile Ala Gly Ile Ala
 80 85 90
 Ser Ala Val Ile Leu Phe Val Ala Val Val Ala Thr Thr Ile Cys
 95 100 105
 Cys Phe Leu Cys Ser Cys Cys Tyr Leu Tyr Arg Arg Arg Gln Gln
 110 115 120
 Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile
 125 130 135
 Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly
 140 145 150
 Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro
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Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro
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<210> 352

<211> 3226

<212> DNA

<213> Homo sapiens

<400> 352

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 <211> 941
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro
 50 55 60
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr
 65 70 75
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr
 80 85 90
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala
 95 100 105
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu
 110 115 120
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala
 125 130 135
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His
 140 145 150
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser
 155 160 165
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr
 170 175 180
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp
 185 190 195
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu
 200 205 210
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val

215	220	225
Thr Val Ala Glu Gly Leu Ile Glu Asp His Phe Asp Val Thr Val	230	240
Lys Met Ser Thr Tyr Leu Val Ala Phe Ile Ile Ser Asp Phe Glu	245	255
Ser Val Ser Lys Ile Thr Lys Ser Gly Val Lys Val Ser Val Tyr	260	270
Ala Val Pro Asp Lys Ile Asn Gln Ala Asp Tyr Ala Leu Asp Ala	275	285
Ala Val Thr Leu Leu Glu Phe Tyr Glu Asp Tyr Phe Ser Ile Pro	290	300
Tyr Pro Leu Pro Lys Gln Asp Leu Ala Ala Ile Pro Asp Phe Gln	305	315
Ser Gly Ala Met Glu Asn Trp Gly Leu Thr Thr Tyr Arg Glu Ser	320	330
Ala Leu Leu Phe Asp Ala Glu Lys Ser Ser Ala Ser Ser Lys Leu	335	345
Gly Ile Thr Val Thr Val Ala His Glu Leu Ala His Gln Trp Phe	350	360
Gly Asn Leu Val Thr Met Glu Trp Trp Asn Asp Leu Trp Leu Asn	365	375
Glu Gly Phe Ala Lys Phe Met Glu Phe Val Ser Val Ser Val Thr	380	390
His Pro Glu Leu Lys Val Gly Asp Tyr Phe Phe Gly Lys Cys Phe	395	405
Asp Ala Met Glu Val Asp Ala Leu Asn Ser Ser His Pro Val Ser	410	420
Thr Pro Val Glu Asn Pro Ala Gln Ile Arg Glu Met Phe Asp Asp	425	435
Val Ser Tyr Asp Lys Gly Ala Cys Ile Leu Asn Met Leu Arg Glu	440	450
Tyr Leu Ser Ala Asp Ala Phe Lys Ser Gly Ile Val Gln Tyr Leu	455	465
Gln Lys His Ser Tyr Lys Asn Thr Lys Asn Glu Asp Leu Trp Asp	470	480
Ser Met Ala Ser Ile Cys Pro Thr Asp Gly Val Lys Gly Met Asp	485	495
Gly Phe Cys Ser Arg Ser Gln His Ser Ser Ser Ser His Trp	500	510
His Gln Glu Gly Val Asp Val Lys Thr Met Met Asn Thr Trp Thr	515	525
Leu Gln Arg Gly Phe Pro Leu Ile Thr Ile Thr Val Arg Gly Arg		

Asn Val His Met	530	Lys Gln Glu His Tyr	535	Met Lys Gly Ser Asp	540	Gly
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Ala Pro Asp Thr		Gly Tyr Leu Trp His	560	Val Pro Leu Thr Phe		Ile
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Thr Ser Lys Ser		Asn Met Val His Arg	575	Phe Leu Leu Lys Thr		Lys
	575		580			585
Thr Asp Val Leu		Ile Leu Pro Glu Glu	590	Val Glu Trp Ile Lys		Phe
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Asn Val Gly Met		Asn Gly Tyr Tyr Ile	605	Val His Tyr Glu Asp		Asp
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Gly Trp Asp Ser		Leu Thr Gly Leu Leu	620	Lys Gly Thr His Thr		Ala
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Val Ser Ser Asn		Asp Arg Ala Ser Leu	635	Ile Asn Asn Ala Phe		Gln
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Leu Val Ser Ile		Gly Lys Leu Ser Ile	650	Glu Lys Ala Leu Asp		Leu
	650		655			660
Ser Leu Tyr Leu		Lys His Glu Thr Glu	665	Ile Met Pro Val Phe		Gln
	665		670			675
Gly Leu Asn Glu		Leu Ile Pro Met Tyr	680	Lys Leu Met Glu Lys		Arg
	680		685			690
Asp Met Asn Glu		Val Glu Thr Gln Phe	695	Lys Ala Phe Leu Ile		Arg
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Ser Val Ser Glu		Gln Met Leu Arg Ser	725	Glu Leu Leu Leu Leu		Ala
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Cys Val His Asn		Tyr Gln Pro Cys Val	740	Gln Arg Ala Glu Gly		Tyr
	740		745			750
Phe Arg Lys Trp		Lys Glu Ser Asn Gly	755	Asn Leu Ser Leu Pro		Val
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Asp Val Thr Leu		Ala Val Phe Ala Val	770	Gly Ala Gln Ser Thr		Glu
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Gly Trp Asp Phe		Leu Tyr Ser Lys Tyr	785	Gln Phe Ser Leu Ser		Ser
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Lys Glu Lys Leu		Gln Trp Leu Leu Asp	815	Glu Ser Phe Lys Gly		Asp
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Lys Ile Lys Thr		Gln Glu Phe Pro Gln	830	Ile Leu Thr Leu Ile		Gly
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Arg Asn Pro Val		Gly Tyr Pro Leu Ala		Trp Gln Phe Leu Arg		Lys

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Ile Ala His Met	Val Met Gly Thr Thr Asn Gln Phe Ser Thr Arg				
	875		880		885
Thr Arg Leu Glu	Glu Val Lys Gly Phe Phe Ser Ser Leu Lys Glu				
	890		895		900
Asn Gly Ser Gln	Leu Arg Cys Val Gln Gln Thr Ile Glu Thr Ile				
	905		910		915
Glu Glu Asn Ile	Gly Trp Met Asp Lys Asn Phe Asp Lys Ile Arg				
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Val Trp Leu Gln	Ser Glu Lys Leu Glu Arg Met				
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 <211> 1587
 <212> DNA
 <213> Homo sapiens

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Pro Gln Pro Gly	Cys Asn Leu Leu Asn Gly	Thr Gln Glu Ile Gly
185	190	195
Pro Val Gly Met	Thr Glu Asn Cys Asn Arg	Lys Asp Phe Leu Thr
200	205	210
Cys His Arg Gly	Thr Thr Ile Met Thr	His Gly Asn Leu Ala Gln
215	220	225
Glu Pro Thr Asp	Trp Thr Thr Ser Asn Thr	Glu Met Cys Glu Val
230	235	240
Gly Gln Val Cys	Gln Glu Thr Leu Leu Leu	Ile Asp Val Gly Leu
245	250	255
Thr Ser Thr Leu	Val Gly Thr Lys Gly Cys	Ser Thr Val Gly Ala
260	265	270
Gln Asn Ser Gln	Lys Thr Thr Ile His Ser	Ala Pro Pro Gly Val
275	280	285
Leu Val Ala Ser	Tyr Thr His Phe Cys Ser	Ser Asp Leu Cys Asn
290	295	300
Ser Ala Ser Ser	Ser Ser Val Leu Leu Asn	Ser Leu Pro Pro Gln
305	310	315
Ala Ala Pro Val	Pro Gly Asp Arg Gln Cys	Pro Thr Cys Val Gln
320	325	330
Pro Leu Gly Thr	Cys Ser Ser Gly Ser Pro	Arg Met Thr Cys Pro
335	340	345
Arg Gly Ala Thr	His Cys Tyr Asp Gly Tyr	Ile His Leu Ser Gly
350	355	360
Gly Gly Leu Ser	Thr Lys Met Ser Ile Gln	Gly Cys Val Ala Gln
365	370	375
Pro Ser Ser Phe	Leu Leu Asn His Thr Arg	Gln Ile Gly Ile Phe
380	385	390
Ser Ala Arg Glu	Lys Arg Asp Val Gln Pro	Pro Ala Ser Gln His
395	400	405
Glu Gly Gly Gly	Ala Glu Gly Leu Glu Ser	Leu Thr Trp Gly Val
410	415	420
Gly Leu Ala Leu	Ala Pro Ala Leu Trp Trp	Gly Val Val Cys Pro
425	430	435

Ser Cys

<210> 356
 <211> 1238
 <212> DNA
 <213> Homo sapiens

<400> 356
 gcgacgggca ggacgcccc ttgcctagc gcgtgctcag gagttggtgt 50
 cctgcctgcg ctccaggatga gggggaatct gccctgggtg ggcttctaa 100
 tcagcctggc ctctcgtgca ctgctgcat ctggacatcc tcagccggct 150
 ggcgatgacg cctgctctgt gcagatccctc gtccctggcc tcaaagggga 200
 tgcgggagag aaggagagaca aaggcgcccc cggacggcct ggaagagtcg 250
 gccccacggg agaaaaagga gacatggggg acaaagaca gaaaggcagt 300
 gtgggtcgtc atggaaaaat tgggtccatt ggctctaaag gtgagaaagg 350
 agattccggt gacataggac cccctgggtcc taatggagaa ccaggcctcc 400
 catgtgagtg cagccagctg cgcaaggcca tcggggagat ggacaaccag 450
 gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtcgccgg 500
 tgtgcgcgag acggagagca agatctacct gctggtgaag gaggagaagc 550
 gctacgcgga cgcaccagctg tcctgccagg gccgcggggg cacgctgagc 600
 atgcccaagg acgaggtctg caatggcctg atggccgcac acctggcgca 650
 agccggcctg gcccggtgtc tcacggcat caacgacctg gagaaggagg 700
 gcgccttcgt gtactctgac cactccccc tgccggacct caacaagtgg 750
 cgagcggtg agcccaaca tgccctacgac gaggaggact gcgtggagat 800
 ggtggcctcg ggcggctgga acgacgtggc ctgccacacc acctgtact 850
 tcattgttga gtttgacaag gagaacatgt gaggctcagg ctggggctgc 900
 ccattggggg ccccatatgt cctgcaggg ttggcaggga cagagcccag 950
 accatggtgc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000
 tgagtagagg gctgttgtct aaactgagaa aatggcctat gcttaagagg 1050
 aaaatgaaag gtgtcctggg gtgctgtctc tgaagaagca gattttcatt 1100
 acctgtattg tagccccaat gtcattatgt aattattacc cagaattgtc 1150
 cttccataaa gcttgtgcct ttgtccaagc tatacataaa aatctttaag 1200
 tagtgcagta gttaagtcca aaaaaaaaaa aaaaaaaaa 1238

<210> 357
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 357
 Met Arg Gly Asn Leu Ala Leu Val Gly Val Leu Ile Ser Leu Ala
 1 5 10 15
 Phe Leu Ser Leu Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp
 20 25 30

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp		35	40	45
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg		50	55	60
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln		65	70	75
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser		80	85	90
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro		95	100	105
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys		110	115	120
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu		125	130	135
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu		140	145	150
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp		155	160	165
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro		170	175	180
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln		185	190	195
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys		200	205	210
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe		215	220	225
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu		230	235	240
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala		245	250	255
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn		260	265	270

Met

<210> 358
 <211> 972
 <212> DNA
 <213> Homo sapiens

<400> 358
 agtgactgca gccttctctag atccctctcca ctctgtttct ctctttgcag 50
 gagcaccggc agcaccagtg tgtgagggga gcaggcagcg gtcctagcca 100
 gttccttgat cctgccagac caccagccc ccggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200
 tagctcagag ctttgggggt gtctgtaagg agccacagga ggaggtggtt 250
 cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgtctcca 300
 gagactcttc aaaagccact catctctgga gggattgctc aaagccctga 350
 gccaggctag cacagatcct aaggaatcaa catctccga gaaacgtgac 400
 atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450
 gggaaagaca ggacctttct taccttcagt gagggttctc cgcccccttc 500
 atcccaatca gcttggatcc acaggaaaagt cttccctggg aacagaggag 550
 cagagacctt tataaagact tctacggat gtgaatcaag agaacgtccc 600
 cagctttggc atctcctaagt atcccccgag agcagaatag gtactccact 650
 tccggactcc tggactgcat taggaagacc tctttccctg tcccaatccc 700
 cagggtgcga cgtctctgtt accctttctc ttcctgttcc ttgtaacatt 750
 cttgtgcttt gactccttct ccatcttttc tacctgacct tgggtgtggaa 800
 actgcatagt gaatatcccc aaccccaatg ggcattgact gtagaatacc 850
 cttagagtcc tgtagtgtcc tacattaaaa atataatgtc tctctctatt 900
 cctcaacaat aaaggatttt tgcataatgaa aaaaaaaaaa aaaaaaaaaa 950
 aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 359
 Met Arg Ile Met Leu Leu Phe Thr Ala Ile Leu Ala Phe Ser Leu
 1 5 10 15
 Ala Gln Ser Phe Gly Ala Val Cys Lys Glu Pro Gln Glu Glu Val
 20 25 30
 Val Pro Gly Gly Arg Ser Lys Arg Asp Pro Asp Leu Tyr Gln
 35 40 45
 Leu Leu Gln Arg Leu Phe Lys Ser His Ser Ser Leu Glu Gly Leu
 50 55 60
 Leu Lys Ala Leu Ser Gln Ala Ser Thr Asp Pro Lys Glu Ser Thr
 65 70 75
 Ser Pro Glu Lys Arg Asp Met His Asp Phe Phe Val Gly Leu Met
 80 85 90
 Gly Lys Arg Ser Val Gln Pro Glu Gly Lys Thr Gly Pro Phe Leu
 95 100 105
 Pro Ser Val Arg Val Pro Arg Pro Leu His Pro Asn Gln Leu Gly
 110 115 120

Ser	Thr	Gly	Lys	Ser	Ser	Leu	Gly	Thr	Glu	Glu	Gln	Arg	Pro	Leu
				125					130					135

<210> 360
 <211> 1738
 <212> DNA
 <213> Homo sapiens

<400> 360
 gggcgctctcc ggctgctcct attgagctgt ctgctcgctg tgcgcgctgt 50
 gcctgctgtg cccgcgctgt cgcgcgctgt accgcgctgt ctggacgcgg 100
 gagacgccag cgagctgggt attggagccc tgcggagagc tcaagcggcc 150
 agctctgccc caggagccca ggctgccccg tgagtcccat agttgctgca 200
 ggagtggagc catgagctgc gtccctgggtg gtgtcatccc cttggggctg 250
 ctgttctctg tctgcggatc ccaaggctac ctctgcccc acgtcactct 300
 cttagaggag ctgctcagca aataccagca caacgagtct cactccgggg 350
 tcgcgagagc catccccagg gaggacaagg aggagatcct catgctgcac 400
 aacaagcttc ggggccagggt gcagcctcag gcctccaaca tggagtacat 450
 ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggccttg 500
 gccaccagcc tgctctgttc ccagccagc tctgttcccc agccagtgcg 550
 tgtgatggct ggctcagggt ctccctctgc agggggaggat ccggtctctg 600
 ttctgttttg tttgtttgtt ttgagacagg gtctcactct gccactgacg 650
 ctggagtgca atggcacaat cgtcatgccc tgaaacctta gactcccggg 700
 gttaaagcat cctgcttcag cctccaagt agctggaact acaggcatgc 750
 accatggtgc ccagctagat tttaaatatt ttgtggagat gggggctctg 800
 ctacgttgcc caggctgggtc ttgaactcct aggcctaagc aatcctcctg 850
 cctcagcctc tcaaagtgct aggattatag gcatgagtca cctgtctctg 900
 ctctggctct gttcttaaca ttctgccaaa acaacacacg tgggttccct 950
 gtgcagagcc tgccctgttg ccttcagtgc actcttggtg gctccactgg 1000
 gaacacagct ctcagccttt ccacctgga ggcagagtgg ggagggggcc 1050
 agggctgggc tttgctgatg ctgatctcag ctgtgccaca cgctagctgc 1100
 accaccctga cttctcctta gcccggttga gcctcacttt ccacttggag 1150
 agtccctctc cgcgtggttg ccatgactgt gagataagtc gaggctgtga 1200
 agggcccgcc acagactgac ctgcctcccc aaccctaggt ctttgctaac 1250
 cgggaaagga gctaacgggt acagaagaca gccaaaggta accctccggc 1300
 gtgattgtga tgggtgttcc aggtgtggtt gggcgatgct gctacttgac 1350

cccaagctcc agtgtggaac cttccttctt ggctggtttt ccagaactac 1400
 agaggaatgg accacagtct tccaggggtcc ctctctgtcc accaacoggg 1450
 agcctccacc ttggccatcc gtcagctatg aatggctttt taaacaaacc 1500
 cactgtccag cctgggtaac atggtaaagc cccgtctcta caaaaaaatc 1550
 caagttagcc gggcatggtg gtgcgcacct gtagtccag ctgcagtggg 1600
 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650
 ttgagcctgg gaagtcgagg ctgcagtggg ctgagattgc accactgcac 1700
 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 361
 Met Ser Cys Val Leu Gly Gly Val Ile Pro Leu Gly Leu Leu Phe
 1 5 10 15
 Leu Val Cys Gly Ser Gln Gly Tyr Leu Leu Pro Asn Val Thr Leu
 20 25 30
 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser
 35 40 45
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu
 50 55 60
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser
 65 70 75
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp
 80 85 90
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser
 95 100 105
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val
 110 115 120
 Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val
 125 130 135
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln
 140 145 150
 Trp His Asn Arg His Ala Leu Lys Pro
 155

<210> 362
 <211> 422
 <212> DNA
 <213> Homo sapiens

<400> 362
 aaggagaggc caccgggact tcagtgtctc ctccatccca ggagcgagc 50

ggccactatg gggctctgggc tgccccttgt cctcctcttg accctccttg 100
gcagctcaca tggaacaggc cggggtatga ctttgcaact gaagctgaag 150
gagtcttttc tgacaaattc ctccatgatgag tccagcttcc tgggaattgct 200
tgaaaagctc tgccctctcc tccatctccc ttcaggagacc agcgtcacc 250
tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300
ttgaagcctg tgtccttctt ggcccgggct tttgggcggg ggaatgcagga 350
ggcaggcccc gaccctgtct ttcagcaggc cccaccctc ctgagtggca 400
ataaataaaa ttcggtatgc tg 422

<210> 363
<211> 78
<212> PRT
<213> Homo sapiens

<400> 363
Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly
1 5 10 15
Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu
20 25 30
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu
35 40 45
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly
50 55 60
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val
65 70 75
Cys Asn Thr

<210> 364
<211> 826
<212> DNA
<213> Homo sapiens

<400> 364
aattgtatct gtgtaattgt aaaacaaacg aaataaaata gaaggaaaaa 50
ctttctgagt ttcaaaaaca acagactagt actctaaaga actcttttaa 100
acaattaact gttaggattg cagttatgat tggatattat ttaattctgt 150
ttctgatgtg gggttccctc actgtgttct gtgtgctatt aatatttacc 200
attgcagaag cttcattcag tgttgaaaat gaatgcttag tggatctgtg 250
cctcttacgc atatgttaca aattatctg agttcctaata caatgcagag 300
ttccctctcc ctccgattgt tctaaataat tgaaagatgt ctgctgtgga 350
aaaaggcatg tattttaaact tgtatgattc tcaaccatct ttagttggga 400
aaggtccttg aaagccaatg gaaatacttt ttttttttct tggcactaat 450

aaaagatccg gactctgctg aatgcaagct gtgacaacat gctgatgggc 550
 ataaagtctt tgaataatgt gaagaagatg atggacacac atggctcttg 600
 gatgaaagat gctgtctata actctccaaa ggtgtactta ttaattggat 650
 ccagaaacaa cactgttttg gaatttgcaa acatacgggc attcatggag 700
 gataacacca agccagctcc ccggaagcaa atcctaacac ttctctggca 750
 gggaacagcg caagtgatct acaaaggttt tctatttttt cataaccaag 800
 caacttotaa tgagataatc aaatataacc tgcagaagag gactgtggaa 850
 gatcgaatgc tgcctccagg aggggtaggc cgagcattgg ttaccagca 900
 ctccccctca acttacattg acctggctgt ggatgagcat gggctctggg 950
 ccatccaactc tgggccaggc acccatagcc atttggttct cacaagatt 1000
 gagccgggca cactgggagt ggagcattca tgggataccc catgcagaag 1050
 ccaggatgct gaagcctcat tctctttgtg tggggttctc tatgtgtctc 1100
 acagtactgg gggccaggcg cctcatcgca tcacctgcac ctatgatcca 1150
 ctgggcacta tcagttagga ggaactgccc aacttgttct tccccaagag 1200
 accaagaagt cactccatga tccattacaa cccagagat aagcagctct 1250
 atgcctggaa tgaaggaac cagatcattt acaaactcca gacaaagaga 1300
 aagctgcctc tgaagtaatg cattacagct gtgagaaga gcaactgtgc 1350
 tttggcagct gttctacagg acagttaggc tatagccctc tcacaatata 1400
 gtatccctct aatcacacac aggaagagtg tgtagaagtg gaaatacgt 1450
 tgcctccttt cccaaatgtc actgccttag gtatcttcca agagcttaga 1500
 tgagagcata tcacaggaag agtttcaaca atgtocatta ctccccaaa 1550
 cctctggctc ctcaaggatg accacattct gatacagcct acttcaagcc 1600
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 ccacaattag agttgtatgc cagcccctaa tatteaccac tggcttttct 1700
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 tttcttttct tttttttgag acaaggtctc actatgttgc ccaggctggt 1850
 ctcaaactcc agagctcaag agatcctcct gcctcagcct cctaagtacc 1900
 tgggattaca ggcattgtgc accacacctg gcttaaaata ctattcttta 1950
 ttgaggttta acctctatct cccctagccc tgtccttcca ctaagcttgg 2000
 tagatgtaat aataaagtga aaatattaac atttgaatat cgctttccag 2050
 gtgtggagtg tttgcacatc attgaattct cgtttcacct ttgtgaaca 2100

tgcacaagtc ttacagctg tcattctaga gtttaggtga gtaacacaat 2150
 tacaagtgga aagatacagc tagaaaatac tacaatccc atagtgtttc 2200
 cattgcccaa ggaagcatca aatacgtatg tttgttcacc tactcttata 2250
 gtcaatgcgt tcacgttttc agcctaaaaa taatagtctg tcccttttagc 2300
 cagttttcat gctcgcacaa gacctttcaa taggcctttc aaatgataat 2350
 tcctccagaa aaccagtcta agggtagagga ccccaactct agcctcctct 2400
 tgtctgtctg tcctctgttt ctctctttct gctttaaat caataaaagt 2450
 gacactgagc aaaaaaaaaa aaaaa 2475

<210> 367
 <211> 402
 <212> PRT
 <213> Homo sapiens

<400> 367
 Met Met Val Ala Leu Arg Gly Ala Ser Ala Leu Leu Val Leu Phe
 1 5 10 15
 Leu Ala Ala Phe Leu Pro Pro Pro Gln Cys Thr Gln Asp Pro Ala
 20 25 30
 Met Val His Tyr Ile Tyr Gln Arg Phe Arg Val Leu Glu Gln Gly
 35 40 45
 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe
 50 55 60
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln
 65 70 75
 Thr Tyr Thr Ser Glu Tyr Lys Ser Ala Val Gly Asn Leu Ala Leu
 80 85 90
 Arg Val Glu Arg Ala Gln Arg Glu Ile Asp Tyr Ile Gln Tyr Leu
 95 100 105
 Arg Glu Ala Asp Glu Cys Ile Val Ser Glu Asp Lys Thr Leu Ala
 110 115 120
 Glu Met Leu Leu Gln Glu Ala Glu Glu Glu Lys Lys Ile Arg Thr
 125 130 135
 Leu Leu Asn Ala Ser Cys Asp Asn Met Leu Met Gly Ile Lys Ser
 140 145 150
 Leu Lys Ile Val Lys Lys Met Met Asp Thr His Gly Ser Trp Met
 155 160 165
 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly
 170 175 180
 Ser Arg Asn Asn Thr Val Trp Glu Phe Ala Asn Ile Arg Ala Phe
 185 190 195
 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr
 200 205 210

aaacacattc cttgggaagg caaagttttc tgggacttga tcatacattt 2100
 tatatggttg ggacttctct cttcgggaga tgatatcttg ttaaggaga 2150
 cctcttttca gttcatcaag ttcacagat atttgagtgc coactctgtg 2200
 cccaaataaa tatgagctgg ggattaaaaa aaaaaaaaaa aaaaaaaaaa 2250
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

<210> 369
 <211> 447
 <212> PRT
 <213> Homo sapiens

<400> 369
 Met Glu Leu Ser Gln Met Ser Glu Leu Met Gly Leu Ser Val Leu
 1 5 10 15
 Leu Gly Leu Leu Ala Leu Met Ala Thr Ala Ala Val Ala Arg Gly
 20 25 30
 Trp Leu Arg Ala Gly Glu Glu Arg Ser Gly Arg Pro Ala Cys Gln
 35 40 45
 Lys Ala Asn Gly Phe Pro Pro Asp Lys Ser Ser Gly Ser Lys Lys
 50 55 60
 Gln Lys Gln Tyr Gln Arg Ile Arg Lys Glu Lys Pro Gln Gln His
 65 70 75
 Asn Phe Thr His Arg Leu Leu Ala Ala Ala Leu Lys Ser His Ser
 80 85 90
 Gly Asn Ile Ser Cys Met Asp Phe Ser Ser Asn Gly Lys Tyr Leu
 95 100 105
 Ala Thr Cys Ala Asp Asp Arg Thr Ile Arg Ile Trp Ser Thr Lys
 110 115 120
 Asp Phe Leu Gln Arg Glu His Arg Ser Met Arg Ala Asn Val Glu
 125 130 135
 Leu Asp His Ala Thr Leu Val Arg Phe Ser Pro Asp Cys Arg Ala
 140 145 150
 Phe Ile Val Trp Leu Ala Asn Gly Asp Thr Leu Arg Val Phe Lys
 155 160 165
 Met Thr Lys Arg Glu Asp Gly Gly Tyr Thr Phe Thr Ala Thr Pro
 170 175 180
 Glu Asp Phe Pro Lys Lys His Lys Ala Pro Val Ile Asp Ile Gly
 185 190 195
 Ile Ala Asn Thr Gly Lys Phe Ile Met Thr Ala Ser Ser Asp Thr
 200 205 210
 Thr Val Leu Ile Trp Ser Leu Lys Gly Gln Val Leu Ser Thr Ile
 215 220 225
 Asn Thr Asn Gln Met Asn Asn Thr His Ala Ala Val Ser Pro Cys
 230 235 240

Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445	

<210> 370
 <211> 1415
 <212> DNA
 <213> Homo sapiens

<400> 370
 tggcctcccc agcttgccag gcacaaggct gagcgggagg aagcgagagg 50
 catctaagca ggcagtggtt tgccttcacc ccaagtgacc atgagagggt 100
 ccacgcgagt ctcaatcatg ctctcctag taactgtgtc tgactgtgct 150
 gtgatcacag gggcctgtga gcggtgatgc cagtgtgggg caggcacctg 200
 ctgtgccatc agcctgtggc ttcgagggtc gcggtatgac accccgctgg 250
 ggcgggaagg cgaggagtgc caccocggca gccacaaggt ccccttcttc 300
 aggaacgcga agcaccacac ctgtccttgc ttgccaacc tgctgtgtgc 350
 caggttcccg gacggcaggt accgctgtgc catggacttg aagaacatca 400

atcttttaggc gcttgccctgg tctcaggata cccaccatcc ttttctgag 450
 cacagcctgg atcttttatt ctgccatgaa acccagctcc catgactctc 500
 ccagtcacct cactgactac cctgatctct ctgtctagt acgcacatat 550
 gcacacaggc agacatacct cccatcatga catgggtccc aggcctggcct 600
 gaggatgtca cagcttgagg ctgtgggtgt aaaggtggcc agcctggctc 650
 tcttccctgc tcaggctgcc agagaggtgg taaatggcag aaaggacatt 700
 cccctccccc tcccagggtg acctgctctc tttcctgggc cctgccctc 750
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 ttgggtgcat tgctcagagt cccagggtcct ggccctgaccc tcaggccctt 850
 cacgtgaggt ctgtgaggac caatttgtgg gtatgtcatc ttcctcgat 900
 tgggttaact cttagtcca gaccacagac tcaagattgg ctcttcccag 950
 agggcagcag acagtcaccc caaggcaggt gtaggaggcc caggagggcc 1000
 aatcagcccc ctgaagactc tgggtccagt cagcctgtgg cttgtggcct 1050
 gtgacctgtg acctctctgc agaattgtca tgccctctgag gccctctctt 1100
 accacacttt accagttaac cactgaagcc cccaattccc acagcttttc 1150
 cattaaaaatg caaatgggtg tggttcaatc taatctgata ttgacatatt 1200
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 ctgagagcag gttggtgact ttgaggaggg cagtcctctg tccagattgg 1300
 ggtgggagca agggacaggg agcagggcag gggctgaaag gggcactgat 1350
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<210> 371

<211> 105

<212> PRT

<213> Homo sapiens

<400> 371

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Val	Ser	Asp	Cys	Ala	Val	Ile	Thr	Gly	Ala	Cys	Glu	Arg	Asp	Val
			20						25				30	
Gln	Cys	Gly	Ala	Gly	Thr	Cys	Cys	Ala	Ile	Ser	Leu	Trp	Leu	Arg
			35						40				45	
Gly	Leu	Arg	Met	Cys	Thr	Pro	Leu	Gly	Arg	Glu	Gly	Glu	Glu	Cys
			50						55				60	
His	Pro	Gly	Ser	His	Lys	Val	Pro	Phe	Phe	Arg	Lys	Arg	Lys	His
			65						70				75	

His Thr Cys Pro Cys Leu Pro Asn Leu Leu Cys Ser Arg Phe Pro
80 85 90

Asp Gly Arg Tyr Arg Cys Ser Met Asp Leu Lys Asn Ile Asn Phe
95 100 105

<210> 372

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 372

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cattggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150
acacagacgt gtttctgtcc aagcccaga aagcggccct ggagtacctg 200
gaggatatag acctgaaaa actggagaag gaaccaagga ctttcaaaag 250
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catcaggact gaagtgaagg atttcagcc ttatttcaaa ggagaaatct 450
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atggcgaaac ccgctctcta ctaaaaatac aaaaatcacc cgggtgtggt 1150
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ttccagcctg ggtgactgag actctaacta a 1281

<210> 373
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373
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 Ser Ile Gly Ala Gly Ala Leu Gly Ala Ala Leu Ala Leu Leu
 20 25 30
 Leu Ala Asn Thr Asp Val Phe Leu Ser Lys Pro Gln Lys Ala Ala
 35 40 45
 Leu Glu Tyr Leu Glu Asp Ile Asp Leu Lys Thr Leu Glu Lys Glu
 50 55 60
 Pro Arg Thr Phe Lys Ala Lys Glu Leu Trp Glu Lys Asn Gly Ala
 65 70 75
 Val Ile Met Ala Val Arg Arg Pro Gly Cys Phe Leu Cys Arg Glu
 80 85 90
 Glu Ala Ala Asp Leu Ser Ser Leu Lys Ser Met Leu Asp Gln Leu
 95 100 105
 Gly Val Pro Leu Tyr Ala Val Val Lys Glu His Ile Arg Thr Glu
 110 115 120
 Val Lys Asp Phe Gln Pro Tyr Phe Lys Gly Glu Ile Phe Leu Asp
 125 130 135
 Glu Lys Lys Lys Phe Tyr Gly Pro Gln Arg Arg Lys Met Met Phe
 140 145 150
 Met Gly Phe Ile Arg Leu Gly Val Trp Tyr Asn Phe Phe Arg Ala
 155 160 165
 Trp Asn Gly Gly Phe Ser Gly Asn Leu Glu Gly Glu Gly Phe Ile
 170 175 180
 Leu Gly Gly Val Phe Val Val Gly Ser Gly Lys Gln Gly Ile Leu
 185 190 195
 Leu Glu His Arg Glu Lys Glu Phe Gly Asp Lys Val Asn Leu Leu
 200 205 210
 Ser Val Leu Glu Ala Ala Lys Met Ile Lys Pro Gln Thr Leu Ala
 215 220 225
 Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374
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 caaagacgcc cggggccaggt gccccgtcgc aggtgccccct ggccggagat 100

gcggtaggag gggcgagcgc gagaagcccc ttctcggcgc ctgccaaacc 150
gccaccacag ccatggcgaa ccccgggctg gggctgcttc tggcgctggg 200
cctgcgcttc ctgctggccc gctggggccg agcctggggg caaatacaga 250
ccactctctc aaatgagaat agcactgttt tgccttcate caccagctcc 300
agctccgatg gcaacctgog tccggaagcc atcactgcta tcatcgttgt 350
cttctccctc ttggtgcct tgcctctggc tgtggggctg gcaactgttg 400
tgcggaagct tcgggagaag cggcagacgg agggcaccta ccggccca 450
agcgaggagc agttctccca tgcagccgag gcccgggccc ctcaggactc 500
caaggagacg gtgcagggct gcctgcccat ctaggtoccc tctcctgcat 550
ctgtctccct tcattgtgtg gtgacctgg ggaaggcag tgcctctct 600
gggcagtcag atccaccacg tgcttaatag cagggaagaa ggtacttcaa 650
agactctgcc cctgaggta agagaggatg gggctattca cttttatata 700
tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375
<211> 123
<212> PRT
<213> Homo sapiens

<400> 375
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Phe Leu Leu Ala Arg Trp Gly Arg Ala Trp Gly Gln Ile Gln Thr
20 25 30
Thr Ser Ala Asn Glu Asn Ser Thr Val Leu Pro Ser Ser Thr Ser
35 40 45
Ser Ser Ser Asp Gly Asn Leu Arg Pro Glu Ala Ile Thr Ala Ile
50 55 60
Ile Val Val Phe Ser Leu Leu Ala Ala Leu Leu Ala Val Gly
65 70 75
Leu Ala Leu Leu Val Arg Lys Leu Arg Glu Lys Arg Gln Thr Glu
80 85 90
Gly Thr Tyr Arg Pro Ser Ser Glu Glu Gln Phe Ser His Ala Ala
95 100 105
Glu Ala Arg Ala Pro Gln Asp Ser Lys Glu Thr Val Gln Gly Cys
110 115 120
Leu Pro Ile

<210> 376
<211> 713
<212> DNA
<213> Homo sapiens

<400> 376
aatatatcat ctatttatca ttaatcaata atgtattctt ttattccaat 50
aacatttggg ttttgggatt ttaattttca aacacagcag aatgacattt 100
tttctgtcac tattattatt gttgggtatgt gaagctattt ggagatccaa 150
ttcaggaagc aacacattgg agaattggcta ctttctatca agaaataaag 200
agaaccacag tcaaccacac caatcatctt tagaagacag tgtgactcct 250
accaaagctg tcaaaaccac aggcaagggc atagttaaag gacggaatct 300
tgactcaaga gggtaattc ttggtgctga agcctggggc aggggtgtaa 350
agaaaaacac ttagattcaa tgattgtaaa ttaaaggcaa atacacatat 400
tagtattacc ttagtgtaat gtatccctgt catatatata ataagggtgaa 450
attataagta ccctatgcag ttggctggac agttcctaat tggactttat 500
taattttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550
acaggagatc atataatttg atacaaataa aagaaaagtg ttctctcccc 600
ttacagaatt gacattttta atgcgataca gttagaatag gaaatatgac 650
attagaaagg aagaatgaca gggagaaaagg aaagaaggga aaatgttgcc 700
aaggaaaaaa aaa 713

<210> 377
<211> 90
<212> PRT
<213> Homo sapiens

<400> 377
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Ile Trp Arg Ser Asn Ser Gly Ser Asn Thr Leu Glu Asn Gly Tyr
20 25 30
Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser
35 40 45
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
50 55 60
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
65 70 75
Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
80 85 90

<210> 378
<211> 3265
<212> DNA
<213> Homo sapiens

<400> 378
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cctcttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcattaagc 100
 tgaataataa tggcctttgaa gatattgtca ttgttataga tccctagtgtg 150
 ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200
 ttctactgtc ctgtttgaag ccacagaaaa aagatTTTTT ttcaaaaaatg 250
 tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaaagg 300
 ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350
 actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400
 agaaaggcga atacattcac ttcacccctg accttctact tggaaaaaaa 450
 caaaatgaat atggaccacc aggcaaaactg tttgtccatg agtgggctca 500
 cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctacc 550
 gtgctaagtc aaaaaaaatc gaagcaacaa ggtgttccgc aggtatctct 600
 ggtagaataa gagtttataa gtgtcaagga ggcagctgtc ttagtagagc 650
 atgcagaatt gattctacaa caaaactgta tggaaaagat tgtcaattct 700
 ttctgataa agtacaaca gaaaagcat ccataatgtt tatgcaaatg 750
 attgattctg ttgttgaatt ttgtaacgaa aaaaccata atcaagaagc 800
 tccaagccta caaaacataa agtgcaattt tagaagtaca tgggaggtga 850
 ttagcaattc tgaggatttt aaaaacacca taccatgtg gacaccacct 900
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aaaaaaaaaa aaaaa 3265

<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

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				20					25					30	
Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp	
				35					40					45	
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser	
				50					55					60	
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn	
				65					70					75	
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr	
				80					85					90	
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val	
				95					100					105	
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln	
				110					115					120	
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro	
				125					130					135	
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly	
				140					145					150	
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe	
				155					160					165	
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys	
				170					175					180	
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn	
				185					190					195	
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys	
				200					205					210	
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe	
				215					220					225	
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met	
				230					235					240	
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His	
				245					250					255	
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg	
				260					265					270	
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr	

Ser Thr Thr Ile

<210> 380

<211> 3877

<212> DNA

<213> Homo sapiens

<400> 380

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 ctggtgtgtg gctgccttcc tatttcaagg aaagacgcca aggtaatatt 150
 gaccagagg agcaatgatg tagccacctc ctaaccttcc ctctttgaac 200
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<210> 381
 <211> 532
 <212> PRT
 <213> Homo sapiens

<400> 381
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 Val Val Leu Leu Val Leu Leu Cys Cys Ala Ile Ser Val Leu Tyr
 20 25 30
 Met Leu Ala Cys Thr Pro Lys Gly Asp Glu Glu Gln Leu Ala Leu
 35 40 45
 Pro Arg Ala Asn Ser Pro Thr Gly Lys Glu Gly Tyr Gln Ala Val
 50 55 60
 Leu Gln Glu Trp Glu Glu Gln His Arg Asn Tyr Val Ser Ser Leu
 65 70 75
 Lys Arg Gln Ile Ala Gln Leu Lys Glu Glu Leu Gln Glu Arg Ser
 80 85 90

Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	
				95					100					105	
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	
				110					115					120	
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	
				125					130					135	
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	
				140					145					150	
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	
				155					160					165	
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	
				170					175					180	
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	
				185					190					195	
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	
				200					205					210	
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	
				215					220					225	
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	
				230					235					240	
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	
				245					250					255	
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala	
				260					265					270	
Lys	Arg	Val	Asp	Lys	Phe	Arg	Gln	Phe	Met	Gln	Asn	Phe	Arg	Glu	
				275					280					285	
Met	Cys	Ile	Glu	Gln	Asp	Gly	Arg	Val	His	Leu	Thr	Val	Val	Tyr	
				290					295					300	
Phe	Gly	Lys	Glu	Glu	Ile	Asn	Glu	Val	Lys	Gly	Ile	Leu	Glu	Asn	
				305					310					315	
Thr	Ser	Lys	Ala	Ala	Asn	Phe	Arg	Asn	Phe	Thr	Phe	Ile	Gln	Leu	
				320					325					330	
Asn	Gly	Glu	Phe	Ser	Arg	Gly	Lys	Gly	Leu	Asp	Val	Gly	Ala	Arg	
				335					340					345	
Phe	Trp	Lys	Gly	Ser	Asn	Val	Leu	Leu	Phe	Phe	Cys	Asp	Val	Asp	
				350					355					360	
Ile	Tyr	Phe	Thr	Ser	Glu	Phe	Leu	Asn	Thr	Cys	Arg	Leu	Asn	Thr	
				365					370					375	
Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr	
				380					385					390	
Asn	Pro	Gly	Ile	Ile	Tyr	Gly	His	His	Asp	Ala	Val	Pro	Pro	Leu	
				395					400					405	

Glu	Gln	Gln	Leu	Val	Ile	Lys	Lys	Glu	Thr	Gly	Phe	Trp	Arg	Asp	410	415	420
Phe	Gly	Phe	Gly	Met	Thr	Cys	Gln	Tyr	Arg	Ser	Asp	Phe	Ile	Asn	425	430	435
Ile	Gly	Gly	Phe	Asp	Leu	Asp	Ile	Lys	Gly	Trp	Gly	Gly	Glu	Asp	440	445	450
Val	His	Leu	Tyr	Arg	Lys	Tyr	Leu	His	Ser	Asn	Leu	Ile	Val	Val	455	460	465
Arg	Thr	Pro	Val	Arg	Gly	Leu	Phe	His	Leu	Trp	His	Glu	Lys	Arg	470	475	480
Cys	Met	Asp	Glu	Leu	Thr	Pro	Glu	Gln	Tyr	Lys	Met	Cys	Met	Gln	485	490	495
Ser	Lys	Ala	Met	Asn	Glu	Ala	Ser	His	Gly	Gln	Leu	Gly	Met	Leu	500	505	510
Val	Phe	Arg	His	Glu	Ile	Glu	Ala	His	Leu	Arg	Lys	Gln	Lys	Gln	515	520	525
Lys	Thr	Ser	Ser	Lys	Lys	Thr									530		

<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 382

ctcggggaaa gggacttgat gttgg 25

<210> 383

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 383

gcgaagggtga gcctctatct cgtgcc 26

<210> 384

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 384

cagcctacac gtattgagg 19

<210> 385

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

cagtcagtagc aatcctggca taatatacgg ccacatgat gcagtcgcc 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

gaaagaatgt tgtggctgct cttttttctg gtgactgcca ttcattgtga 50

actctgtcaa ccaggtgcag aaaatgcttt taaagtgaga cttagtatca 100

gaacagctct gggagataaa gcatatgcct gggataccac tgaagaatac 150

ctcttcaaag cgatggtagc tttctccatg agaaaagtgc ccaacagaga 200

agcaacagaa atttcccatg tcctactttg caatgtaacc cagagggat 250

cattctgtgt tgtggttaca gacccttcaa aaaatcacac ccttctgct 300

gttgagggtc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350

cttctttcta aatgacaaaa ctctggaatt tttaaaaatc ccttccacac 400

ttgaccaccc catggaccaca tctgtgccca tctgattat tataatttgt 450

gtgatatttt gcatcatcat agttgcaatt gcaactactga ttttatcagg 500

gatctggcaa cgtagaagaa agaacaaaga accatctgaa gtggatgacg 550

ctgaagataa gtgtgaaaac atgatacaca ttgaaaatgg catcccctct 600

gatccctcgg acatgaaggg gggcatatta atgatgcctt catgacagag 650

gatgagaggc tcacccctct ctgaagggtc gttgttctgc ttcctcaaga 700

aattaaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750

gcagatcata tattttgttt caccattctt cttttgtaat aaattttgaa 800

tgtgcttgaa agtgaaaagc aatcaattat acccacaac accactgaaa 850

tcataagcta ttcacgactc aaaatattct aaaatatttt tctgacagta 900

tagtgataaa atgtggtcat gtggtatttg tagttattga ttttaagcatt 950

tttagaaata agatcaggca tatgtatata ttttcacact tcaaaagacct 1000

aaggaaaaat aaattttcca gtggagaata catataatat ggtgtagaaa 1050

tcattgaaaa tggatccttt ttgacgatca cttatatcac tctgtatatg 1100

actaagtaaa caaaagttag aagtaattat tgtaaatgga tggataaaaa 1150

tggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200

gttgattata tattttctga atatcagccc ctaataggac aattctattt 1250

gttgaccatt tctacaattt gtaaaagtcc aatctgtgct aacttaataa 1300
 agtaataatc atctcttttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387

<211> 212

<212> PRT

<213> Homo sapiens

<400> 387

Met	Leu	Trp	Leu	Leu	Phe	Phe	Leu	Val	Thr	Ala	Ile	His	Ala	Glu	1	5	10	15
Leu	Cys	Gln	Pro	Gly	Ala	Glu	Asn	Ala	Phe	Lys	Val	Arg	Leu	Ser	20	25	30	
Ile	Arg	Thr	Ala	Leu	Gly	Asp	Lys	Ala	Tyr	Ala	Trp	Asp	Thr	Asn	35	40	45	
Glu	Glu	Tyr	Leu	Phe	Lys	Ala	Met	Val	Ala	Phe	Ser	Met	Arg	Lys	50	55	60	
Val	Pro	Asn	Arg	Glu	Ala	Thr	Glu	Ile	Ser	His	Val	Leu	Leu	Cys	65	70	75	
Asn	Val	Thr	Gln	Arg	Val	Ser	Phe	Trp	Phe	Val	Val	Thr	Asp	Pro	80	85	90	
Ser	Lys	Asn	His	Thr	Leu	Pro	Ala	Val	Glu	Val	Gln	Ser	Ala	Ile	95	100	105	
Arg	Met	Asn	Lys	Asn	Arg	Ile	Asn	Asn	Ala	Phe	Phe	Leu	Asn	Asp	110	115	120	
Gln	Thr	Leu	Glu	Phe	Leu	Lys	Ile	Pro	Ser	Thr	Leu	Ala	Pro	Pro	125	130	135	
Met	Asp	Pro	Ser	Val	Pro	Ile	Trp	Ile	Ile	Ile	Phe	Gly	Val	Ile	140	145	150	
Phe	Cys	Ile	Ile	Ile	Val	Ala	Ile	Ala	Leu	Leu	Ile	Leu	Ser	Gly	155	160	165	
Ile	Trp	Gln	Arg	Arg	Arg	Lys	Asn	Lys	Glu	Pro	Ser	Glu	Val	Asp	170	175	180	
Asp	Ala	Glu	Asp	Lys	Cys	Glu	Asn	Met	Ile	Thr	Ile	Glu	Asn	Gly	185	190	195	
Ile	Pro	Ser	Asp	Pro	Leu	Asp	Met	Lys	Gly	Gly	Ile	Leu	Met	Met	200	205	210	
Pro Ser																		

<210> 388

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 388

aactcaaaact cctctctctg ggaaaacgcg gtgcttgctc ctcccggagt 50

<210> 392
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 392
 gagaggactg cgaggagtgt ggacctttgt gcagacgtgc tcatg 45

<210> 393
 <211> 471
 <212> DNA
 <213> Homo sapiens

<400> 393
 gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttctt 50
 agcagtcctg gtactcttgg gagtttccat ctttctggtc tctgccaga 100
 atccgacaac agctgctcca gctgacacgt atccagctac tggctctgct 150
 gatgatgaag cccctgatgc tgaaccact gctgctgcaa cactgctgac 200
 cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250
 aagacattcc agttttatccc aaatgggttg gggatctccc gaatggtaga 300
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
 tattcatgct tcctgtgatt tcatccaact acttaccttg cctacgatat 400
 cccctttatc tctaatacgt ttattttctt tcaataaaaa aataactatg 450
 agcaacataa aaaaaaaaaa a 471

<210> 394
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 394
 Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe
 1 5 10 15
 Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr
 20 25 30
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
 35 40 45
 Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr
 50 55 60
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
 65 70 75
 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
 80 85 90

<210> 395
 <211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 395
gtccctgat cttcatgtca ccacc 25

<210> 396
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 396
cagggacaca ctctaccatt cgggag 26

<210> 397
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 397
ccatctttct ggtctctgcc cagaatcoga caacagctgc tc 42

<210> 398
<211> 907
<212> DNA
<213> Homo sapiens

<400> 398
ggactctgaa ggtcccaagc agctgctgag gccccaagg aagtgggtcc 50
aaccttggac ccctaggggt ctggatttgc tggtaacaa gataacctga 100
gggcaggacc ccatagggga atgctacctc ctgcccttcc acctgccctg 150
gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200
ggacgcagag gacgctcaca gactccagcc ctttgttacc gagaggacac 250
ttggcaaggt ccagcgatgg tocggagtcc acacacagac tggcggcagg 300
gcaggagggg gacagttctg ttgtgcttgg ttggacagta agaggggtctt 350
ggccagtcca ggggtggggg cggcaaacct cataaagaac cagagggtct 400
gggccccggc cacagagtca totgccagc tccctctgtg ctggccagtg 450
ggagtggcac gaggtggggc tttgtgccag taaaaccaca ggctggattt 500
gcctcggggc catgttccct gtctagggca gcaattctca accttcttgc 550
totcaggacc ccaaagagct ttcattgtat ctattgattt ttaccacatt 600
agcaattaaa actgagaaat gggcggggca cgggtggctca cgcctgtaat 650

cccagcaactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgcaactgg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaaccagg aggcgggacgt tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 399
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala
 1 5 10 15
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu
 20 25 30
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly
 35 40 45
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg
 50 55 60
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg
 65 70 75
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn
 80 85 90
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu
 95 100 105
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln
 110 115 120

<210> 400
 <211> 893
 <212> DNA
 <213> Homo sapiens

<400> 400
 gtcatgccag tgccgtctct gtgcctgctc tgggccctgg caatggtgac 50
 ccggcctgcc tcagcgccc ccattggcgg cccagaactg gcacagcatg 100
 aggagctgac cctgctcttc catgggaccc tgcagctggg ccaggccctc 150
 aacgggtgtg acaggaccac ggagggacgg ctgacaaagg ccaggaacag 200
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250
 ggggccggga tgcagcccag gaacttcggg caagcctgtt ggagactcag 300
 atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350
 gggggagggt gccaggcac agaaggtgct acgggacagc gtgcagcggc 400

tagaagtcca gctgaggagc gcctggctgg gccctgccta ccgagaattt 450
 gaggtctttaa aggctcacgc tgacaagcag agccacatcc tatgggcccct 500
 cacagggccac gtgcagcggc agaggcggga gatggtggga cagcagcatc 550
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600
 atctgcctgg atggaaactga ggaccaatca tgctgcaagg aacacttcca 650
 cgcccgtga ggcctctgtg cagggaggag ctgcctgttc actgggatca 700
 gccagggcgc cgggcccac ttctgagcac agagcagaga cagcgcagg 750
 cggggacaaa ggcagaggat gtgccccat tggggagggg tggaggaagg 800
 acatgtaccc ttctatgcct acacaccct cattaaagca gagtcgtggc 850
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 401
 Met Pro Val Pro Ala Leu Cys Leu Leu Trp Ala Leu Ala Met Val
 1 5 10 15
 Thr Arg Pro Ala Ser Ala Ala Pro Met Gly Gly Pro Glu Leu Ala
 20 25 30
 Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu
 35 40 45
 Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu
 50 55 60
 Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu
 65 70 75
 Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu
 80 85 90
 Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu
 95 100 105
 Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala
 110 115 120
 Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val
 125 130 135
 Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu
 140 145 150
 Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala
 155 160 165
 Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln
 170 175 180
 Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala

Leu Pro Ala

<210> 402
 <211> 1915
 <212> DNA
 <213> Homo sapiens

<400> 402
 ggcaacatgg ctcagcaggc ttgcccaga gccatggcaa agaattggact 50
 tgtaatttgc atcctggtga tcaccttact cctggaccag accaccagcc 100
 acacatccag attaaaaagc aggaagcaca gcaaacgtcg agtgagagac 150
 aaggatggag atctgaagac tcaaatgaa aagctctgga cagaagtc aa 200
 tgccttgaag gaaattcaag cctgcagac agtctgtctc cgaggcacta 250
 aagttcaca gaaatgtac ctgtctcag aaggtttgaa gcatttccat 300
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350
 gaactccgac gaaatcaacg cctccaaga ctatggtaaa aggagcctgc 400
 cagggtgtcaa tgacttttgg ctgggcatca atgacatggt cacggaaggc 450
 aagtttgttg acgtcaacgg aatcgctatc tcttctctca actgggacgc 500
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550
 cagctcaggg caagtggagt gatgaggcct gtgcgcagcag caagagatac 600
 atatgcgagt tcaccatccc taaataggtc ttcttccaat gtgtcctcca 650
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700
 aatcataatt ttactttatt aaaaaattgc aacacaagat caatgtccat 750
 agcaatatga tagcatcagc caattttgct aacacatttc tttgggattt 800
 tgcccttctc ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtctttc 900
 tcaactgtac aaaccaggtt tgttttcaaa aaatcacagt agcaatgcaa 950
 ctcatcactc tagaaaagca agcttaggct acctgaaaga ttttcccttg 1000
 gaagtttagc gtatgtttga ctaacaaaaa ttccctacat cagagactct 1050
 aggtgtctata taatccaaaa acttttcagc ctgtgtgtca tctgtgtcca 1100
 tgcgtggcaat aataccttgt cagcccatta cccttatttt gaattgtctc 1150
 atctcctggt gggacttgta tctgtgtctg catatcagaa cacaaacccc 1200
 tgaagaggtt ctgatttgat tttttttttt tcttcacgac tacctttttt 1250
 ttggaagttt ccagccgcaa tttgaaatga aatgacaagg tgttatattg 1300

atcaattttc attocaccaca ttgcattaca acctctaaact taaatgggta 1350
 accctaaggc atatacaaga agcagattgc atgataaacg gaaatagaaa 1400
 aaaaagaacct acattttatt tgcttttagca tcttactct cactttttat 1450
 gagattgaga gtggacttac atttcctttt ttacattttc gtatatttat 1500
 tttttttagc catcattata tgtttaagtc tattatgggc aaccaatctt 1550
 tggaagctga aaactgaatt taaagaatgc tatcttggaa aattgcatac 1600
 gtctgtgcaa ttttttattc tgcttagtgc tattctgctt gttaacttag 1650
 attgtacaaa ataacttcat tgcttaatat caaattacaa agtttagact 1700
 tggaggggaaa tgggcttttt agaagcaaac aattttaaat atattttgtt 1750
 ctcaataaa atagtgttta aacattgaat gtgttttgtg aacaatatcc 1800
 cactttgcaa actttaacta cacatgcttg gaattaagtt ttactgtttt 1850
 tcattgtctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900
 aaaaaaaaaa aaaaa 1915

<210> 403
 <211> 206
 <212> PRT
 <213> Homo sapiens

<400> 403
 Met Ala Gln Gln Ala Cys Pro Arg Ala Met Ala Lys Asn Gly Leu
 1 5 10 15
 Val Ile Cys Ile Leu Val Ile Thr Leu Leu Leu Asp Gln Thr Thr
 20 25 30
 Ser His Thr Ser Arg Leu Lys Ala Arg Lys His Ser Lys Arg Arg
 35 40 45
 Val Arg Asp Lys Asp Gly Asp Leu Lys Thr Gln Ile Glu Lys Leu
 50 55 60
 Trp Thr Glu Val Asn Ala Leu Lys Glu Ile Gln Ala Leu Gln Thr
 65 70 75
 Val Cys Leu Arg Gly Thr Lys Val His Lys Lys Cys Tyr Leu Ala
 80 85 90
 Ser Glu Gly Leu Lys His Phe His Glu Ala Asn Glu Asp Cys Ile
 95 100 105
 Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile
 110 115 120
 Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn
 125 130 135
 Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe
 140 145 150
 Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg

	155		160		165
Ala	Gln	Pro	Asn	Gly	Gly
	170			Lys	Arg
				Glu	Asn
				Cys	Val
				Leu	Phe
				Ser	180
Gln	Ser	Ala	Gln	Gly	Lys
				Trp	Ser
				Asp	Glu
				Ala	Cys
				Arg	Ser
				Ser	195
Lys	Arg	Tyr	Ile	Cys	Glu
				Phe	Thr
				Ile	Pro
				Lys	205

<210> 404
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 404
 cctgggttatc cccaggaact ccgac 25

<210> 405
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 405
 ctcttgctgc tgcgacagcg ctc 23

<210> 406
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 406
 cgccctccaa gactatggta aaagagcct gccagggtgc aatgac 46

<210> 407
 <211> 570
 <212> DNA
 <213> Homo sapiens

<400> 407
 gcgaggaccg ggtataagaa gctcgtggc cttgcccggg cagccgcagg 50
 ttccccgcgc gccccgagcc ccgcgcgat gaagctcgcc gccctcctgg 100
 ggctctgcgt ggcctgtcc tgcagctccg ctgctgcttt cttagtgggc 150
 tcggccaagc ctgtggccca gctgtcgct gcgctggagt cggcggcgga 200
 ggcgggggcc gggaccctgg ccaacccct cggcacccct aaccgcgtga 250
 agctcctgct gaggagcctg ggcaccccg tgaaccacat catagagggc 300
 tcccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400
ctggagcatc tacacctgag gacaagacgc tgcccacccg cgagggtcta 450
aaaccccgcc gcggggagga cgtgccatcc ccttcccccg gccctctctc 500
ataaacgtgg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
aaaaaaaaaa aaaaaaaaaa 570

<210> 408
<211> 104
<212> PRT
<213> Homo sapiens

<400> 408
Met Lys Leu Ala Ala Leu Leu Gly Leu Cys Val Ala Leu Ser Cys
1 5 10 15
Ser Ser Ala Ala Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala
20 25 30
Gln Pro Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly
35 40 45
Thr Leu Ala Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu
50 55 60
Leu Ser Ser Leu Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser
65 70 75
Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val
80 85 90
Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly
95 100

<210> 409
<211> 2089
<212> DNA
<213> Homo sapiens

<400> 409
tgaaggactt ttccaggacc caaggccaca cactggaagt cttgcagctg 50
aaggaggcca ctccctggcc tccgcagccg atcacatgaa ggtggtgcca 100
agtctctgc tctccgtcct cctggcacag gtgtggctgg taccoggctt 150
ggccccagtg cctcagtcgc cagagacccc agcccctcag aaccagacca 200
gcagggtagt gcaggctccc agggagggaag aggaagatga gcaggaggcc 250
agcgaggaga aggcgggtga ggaagagaaa gcctggctga tggccagcag 300
gcagcagctt gccaaaggaga ctcaaaactt cggattcagc ctgctgcgaa 350
agatctccat gaggcacgat ggcaacatgg tcttctctcc atttgcatg 400
tctctggcca tgacaggctt gatgctgggg gccacagggc cgactgaaac 450
ccagatcaag agagggtctc acttgagggc cctgaagccc accaagcccc 500

ggctcctgcc ttccctcttt aagggactca gagagaccct ctcccgcaac 550
 ctggaactgg gcctctcaca ggggagtttt gccttcaccc acaaggattt 600
 tgatgtcaaa gagactttct tcaattttatc caagaggatg tttgatacag 650
 agtgcgtgcc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700
 aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750
 tgagattaat cctgaaacca aattaattct tgtggattac atcttgttca 800
 aagggaaatg gttgacccca tttgaccctg tcttcaccga agtcgacact 850
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 agtagatgct gaattctgag tatcaaacc acacaggata ccagcaatgg 1500
 atggcagggg agagtgttcc ttttgttctt aactagttaa ggtgtttctc 1550
 aaataaatac agtagtcccc acttatctga gggggatata tcaaaagacc 1600
 ccagcagat gcctgaaacg gtggacagtg ctgaacctta tatatatatt 1650
 ttctacacaa tacataccta tgataaagtt taatttataa attaggcaca 1700
 gtaagagatt aacaataata acaacattaa gtaaaatgag ttacttgaac 1750
 gcaagcactg caataccata acagtcaaac tgattataga gaaggctact 1800
 aagtgactca tgggcgagga goatagacag tgtggagaca ttgggcaagg 1850
 ggagaattca catcctgggt gggacagagc aggacgatgc aagattccat 1900
 cccactactc agaatggcat gctgcttaag acttttagat tgtttatttc 1950
 tggaaatttt catttaattg ttttggacca tggttgacca tggtaactg 2000
 agactgcaga aagcaaaacc atggataagg gaggactact acaaaagcat 2050
 taaattgata catatttttt aaaaaaaaa aaaaaaaaa 2089

<210> 410
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 410
 Met Lys Val Val Pro¹ Ser Leu Leu Leu Ser Val Leu Leu Ala Gln
 1 5 10 15
 Val Trp Leu Val Pro Gly Leu Ala Pro Ser Pro Gln Ser Pro Glu
 20 25 30
 Thr Pro Ala Pro Gln Asn Gln Thr Ser Arg Val Val Gln Ala Pro
 35 40 45
 Arg Glu Glu Glu Glu Asp Glu Gln Glu Ala Ser Glu Glu Lys Ala
 50 55 60
 Gly Glu Glu Glu Lys Ala Trp Leu Met Ala Ser Arg Gln Gln Leu
 65 70 75
 Ala Lys Glu Thr Ser Asn Phe Gly Phe Ser Leu Leu Arg Lys Ile
 80 85 90
 Ser Met Arg His Asp Gly Asn Met Val Phe Ser Pro Phe Gly Met
 95 100 105
 Ser Leu Ala Met Thr Gly Leu Met Leu Gly Ala Thr Gly Pro Thr
 110 115 120
 Glu Thr Gln Ile Lys Arg Gly Leu His Leu Gln Ala Leu Lys Pro
 125 130 135
 Thr Lys Pro Gly Leu Leu Pro Ser Leu Phe Lys Gly Leu Arg Glu
 140 145 150
 Thr Leu Ser Arg Asn Leu Glu Leu Gly Leu Ser Gln Gly Ser Phe
 155 160 165
 Ala Phe Ile His Lys Asp Phe Asp Val Lys Glu Thr Phe Phe Asn
 170 175 180
 Leu Ser Lys Arg Tyr Phe Asp Thr Glu Cys Val Pro Met Asn Phe
 185 190 195
 Arg Asn Ala Ser Gln Ala Lys Arg Leu Met Asn His Tyr Ile Asn
 200 205 210
 Lys Glu Thr Arg Gly Lys Ile Pro Lys Leu Phe Asp Glu Ile Asn
 215 220 225
 Pro Glu Thr Lys Leu Ile Leu Val Asp Tyr Ile Leu Phe Lys Gly
 230 235 240
 Lys Trp Leu Thr Pro Phe Asp Pro Val Phe Thr Glu Val Asp Thr
 245 250 255
 Phe His Leu Asp Lys Tyr Lys Thr Ile Lys Val Pro Met Met Tyr
 260 265 270
 Gly Ala Gly Lys Phe Ala Ser Thr Phe Asp Lys Asn Phe Arg Cys
 275 280 285

His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val
 290 295 300
 Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr
 305 310 315
 Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr
 320 325 330
 Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys
 335 340 345
 Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile
 350 355 360
 Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg
 365 370 375
 Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val
 380 385 390
 Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile
 395 400 405
 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe
 410 415 420
 His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu
 425 430 435
 Gly Arg Val Val Asn Pro Thr Leu Leu
 440

<210> 411

<211> 636

<212> DNA

<213> Homo sapiens

<400> 411

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 cccagacatg aggaggctcc tcttggtcac cagcctggtg gttgtgctgc 100
 tgtggggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150
 gtcaaacact ggccctcaga gcaggaccca gagaaggcct ggggcgcccc 200
 tgtgtgggag cctcoggaga aggacgacca gctggtggtg ctgttccctg 250
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300
 aggggoccca tccttccagg caccaaggcc tggatggaga ccgaggacac 350
 cctgggcccgt gtcctgagtc ccgagcccga ccatgacagc ctgtaccacc 400
 ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450
 ccaaatacacc aggtgctcct gggaccggag gaagaccaag accacatcta 500
 ccacccccag tagggctcca ggggccatca ctgccccgcg cctgtcccaa 550
 ggcccaggct gttgggactg ggaccctccc taccctgccc cagctagaca 600

aataaacccc agcagcgaaa aaaaaaaaaa aaaaaa 636

<210> 412

<211> 151

<212> PRT

<213> Homo sapiens

<400> 412

Met	Arg	Arg	Leu	Leu	Leu	Val	Thr	Ser	Leu	Val	Val	Val	Leu	Leu
1				5					10					15
Trp	Glu	Ala	Gly	Ala	Val	Pro	Ala	Pro	Lys	Val	Pro	Ile	Lys	Met
				20					25					30
Gln	Val	Lys	His	Trp	Pro	Ser	Glu	Gln	Asp	Pro	Glu	Lys	Ala	Trp
				35					40					45
Gly	Ala	Arg	Val	Val	Glu	Pro	Pro	Glu	Lys	Asp	Asp	Gln	Leu	Val
				50					55					60
Val	Leu	Phe	Pro	Val	Gln	Lys	Pro	Lys	Leu	Leu	Thr	Thr	Glu	Glu
				65					70					75
Lys	Pro	Arg	Gly	Gln	Gly	Arg	Gly	Pro	Ile	Leu	Pro	Gly	Thr	Lys
				80					85					90
Ala	Trp	Met	Glu	Thr	Glu	Asp	Thr	Leu	Gly	Arg	Val	Leu	Ser	Pro
				95					100					105
Glu	Pro	Asp	His	Asp	Ser	Leu	Tyr	His	Pro	Pro	Pro	Glu	Glu	Asp
				110					115					120
Gln	Gly	Glu	Glu	Arg	Pro	Arg	Leu	Trp	Val	Met	Pro	Asn	His	Gln
				125					130					135
Val	Leu	Leu	Gly	Pro	Glu	Glu	Asp	Gln	Asp	His	Ile	Tyr	His	Pro
				140					145					150
Gln														

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

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aggagctctc tgtacccaag gaaagtgcag ctgagactca gacaagatta 100
caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150
tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200
gtctccatct ctgccagaaa gctgcaagga aatcaaagac gaatgtccta 250
gtgcatttga tggcctgtat ttctccgca ctgagaatgg tgttatctac 300
cagaccttct gtgacatgac ctctgggggt ggcggtctga cctgtgtgac 350
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacgggt ggcgatcgct 400

ggccagtcac gcagggcagc aaagcagact acccagaggg ggacggcaac 450
 tgggccaact acaacacctt tggatctgca gaggcggcca cgagcgatga 500
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550
 ggacagtgcc caataagtc cccatgcagc actggagaaa cagctccctg 600
 ctgaggtacc gcacggacac tggcttctc cagacactgg gacataatct 650
 gtttggcatc taccagaaat atccagtgaa atatggagaa ggaaagtgtt 700
 ggactgacaa cggcccggtg atccctgtgg tctatgattt tggcgacgcc 750
 cagaaaacag catcttatta ctcaccctat ggccagcggg aattcactgc 800
 gggatttgtt cagttcaggg tatttaataa cgagagagca gccaaagcct 850
 tgtgtgctgg aatgagggtc accgagtgta acactgagca tcaactgcat 900
 ggtggaggag gatactttcc agaggccagt cccagcagtg gtggagattt 950
 ttctggtttt gattggagtg gatatggaac tcatgttggt tacagcagca 1000
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050
 tgtggggagg aaccagagcc tctctccca accatgagat cccaaggatg 1100
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150
 taaatcatat tgactcaaga aaaaaa 1176

<210> 414

<211> 313

<212> PRT

<213> Homo sapiens

<400> 414

Met	Asn	Gln	Leu	Ser	Phe	Leu	Leu	Phe	Leu	Ile	Ala	Thr	Thr	Arg
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Gly	Trp	Ser	Thr	Asp	Glu	Ala	Asn	Thr	Tyr	Phe	Lys	Glu	Trp	Thr
				20					25					30
Cys	Ser	Ser	Ser	Pro	Ser	Leu	Pro	Arg	Ser	Cys	Lys	Glu	Ile	Lys
				35					40					45
Asp	Glu	Cys	Pro	Ser	Ala	Phe	Asp	Gly	Leu	Tyr	Phe	Leu	Arg	Thr
				50					55					60
Glu	Asn	Gly	Val	Ile	Tyr	Gln	Thr	Phe	Cys	Asp	Met	Thr	Ser	Gly
				65					70					75
Gly	Gly	Gly	Trp	Thr	Leu	Val	Ala	Ser	Val	His	Glu	Asn	Asp	Met
				80					85					90
Arg	Gly	Lys	Cys	Thr	Val	Gly	Asp	Arg	Trp	Ser	Ser	Gln	Gln	Gly
				95					100					105
Ser	Lys	Ala	Asp	Tyr	Pro	Glu	Gly	Asp	Gly	Asn	Trp	Ala	Asn	Tyr
				110					115					120
Asn	Thr	Phe	Gly	Ser	Ala	Glu	Ala	Ala	Thr	Ser	Asp	Asp	Tyr	Lys

125	130	135
Asn Pro Gly Tyr	Tyr Asp Ile Gln Ala	Lys Asp Leu Gly Ile Trp
140	145	150
His Val Pro Asn	Lys Ser Pro Met Gln	His Trp Arg Asn Ser Ser
155	160	165
Leu Leu Arg Tyr	Arg Thr Asp Thr Gly	Phe Leu Gln Thr Leu Gly
170	175	180
His Asn Leu Phe	Gly Ile Tyr Gln Lys	Tyr Pro Val Lys Tyr Gly
185	190	195
Glu Gly Lys Cys	Trp Thr Asp Asn Gly	Pro Val Ile Pro Val Val
200	205	210
Tyr Asp Phe Gly	Asp Ala Gln Lys Thr	Ala Ser Tyr Tyr Ser Pro
215	220	225
Tyr Gly Gln Arg	Glu Phe Thr Ala Gly	Phe Val Gln Phe Arg Val
230	235	240
Phe Asn Asn Glu	Arg Ala Ala Asn Ala	Leu Cys Ala Gly Met Arg
245	250	255
Val Thr Gly Cys	Asn Thr Glu His His	Cys Ile Gly Gly Gly Gly
260	265	270
Tyr Phe Pro Glu	Ala Ser Pro Gln Gln	Cys Gly Asp Phe Ser Gly
275	280	285
Phe Asp Trp Ser	Gly Tyr Gly Thr His	Val Gly Tyr Ser Ser Ser
290	295	300
Arg Glu Ile Thr	Glu Ala Ala Val Leu	Leu Phe Tyr Arg
305	310	

<210> 415
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 415
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 cggctgggag cccacgaggc tgccgcattc tgccctcgga acaatgggac 100
 tcggcgcgcg aggtgcttgg gccgcgctgc tcctggggac gctgcagggtg 150
 ctagecgtgc tgggggcccgc ccatgaaagc gcagccatgg cggcatctgc 200
 aaacatagag aattctgggc ttccacacaa ctccagtgct aactcaacag 250
 agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300
 actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350
 caccaccatg aaacctacag cggcatctaa tacaacaaca ccagggtatgg 400
 tctcaacaaa tatgacttct accaccttaa agtctacacc caaacaaca 450
 agtgtttcac agaacacatc tcagatatca acatccacaa tgaccgtaac 500

ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550
 ctatgcattc tgaagcaaag aaaggatcaa aatttgatac tgggagcttt 600
 gtgttggtga ttgtattaac gctgggagtt ttatctattc tttacattgg 650
 atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700
 aacatgatgc catcatttaa ggaaatccat ggaccaagga tggaaacag 750
 attgatgctg cctatcaat taattttggt ttattaatag tttaaaacaa 800
 tattctcttt ttgaaaatag tataaacagg ccatgcatat aatgtacagt 850
 gtattacgta aatatgtaa gattcttcaa ggtaacaagg gtttgggttt 900
 tgaataaac atctggatct tatagaccgt tcatacaatg gttttagcaa 950
 gttcatagta agacaaacaa gtcctatctt ttttttttgg ctgggtggg 1000
 ggcattggtc acatatgacc agtaattgaa agacgtcatc actgaaagac 1050
 agaatgcatc ctgggcatac aaataagaag tttgtcacag cactcaggat 1100
 ttgggtatc tttttagct cacataaaga acttcagtgc tttcagagc 1150
 tggatatatc ttaattacta atgccacaca gaaattatac aatcaaaacta 1200
 gatctgaagc ataatttaag aaaaacatca acattttttg tgctttaaac 1250
 tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416

<211> 208

<212> PRT

<213> Homo sapiens

<400> 416

Met Gly Leu Gly Ala Arg Gly Ala Trp Ala Ala Leu Leu Leu Gly	
1 5 10 15	
Thr Leu Gln Val Leu Ala Leu Leu Gly Ala Ala His Glu Ser Ala	
20 25 30	
Ala Met Ala Ala Ser Ala Asn Ile Glu Asn Ser Gly Leu Pro His	
35 40 45	
Asn Ser Ser Ala Asn Ser Thr Glu Thr Leu Gln His Val Pro Ser	
50 55 60	
Asp His Thr Asn Glu Thr Ser Asn Ser Thr Val Lys Pro Pro Thr	
65 70 75	
Ser Val Ala Ser Asp Ser Ser Asn Thr Thr Val Thr Thr Met Lys	
80 85 90	
Pro Thr Ala Ala Ser Asn Thr Thr Thr Pro Gly Met Val Ser Thr	
95 100 105	
Asn Met Thr Ser Thr Thr Leu Lys Ser Thr Pro Lys Thr Thr Ser	
110 115 120	
Val Ser Gln Asn Thr Ser Gln Ile Ser Thr Ser Thr Met Thr Val	

125	130	135
Thr His Asn Ser Ser Val Thr Ser Ala Ala Ser Ser Val Thr Ile		
140	145	150
Thr Thr Thr Met His Ser Glu Ala Lys Lys Gly Ser Lys Phe Asp		
155	160	165
Thr Gly Ser Phe Val Gly Gly Ile Val Leu Thr Leu Gly Val Leu		
170	175	180
Ser Ile Leu Tyr Ile Gly Cys Lys Met Tyr Tyr Ser Arg Arg Gly		
185	190	195
Ile Arg Tyr Arg Thr Ile Asp Glu His Asp Ala Ile Ile		
200	205	

<210> 417
 <211> 1728
 <212> DNA
 <213> Homo sapiens

<400> 417
 cagccgggtc ccaagcctgt gctgagcct gagcctgagc ctgagcccca 50
 gccgggagcc ggtcgcgggg gctccgggct gtgggaccgc tgggccccca 100
 gcgatggcga ccctgtgggg aggccttctt cggcttggtc cctgtctcag 150
 cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgagc ctgtcagacg 200
 ccgccaagaa ttctgaggat gtcagatgta aatgtatctg cctccctatc 250
 aaagaaaatt ctgggcatat ttataataag aacatatctc agaaagattg 300
 tgattgcctt catgttgttg agcccatgcc tgtgcggggg cctgatgtag 350
 aagcatactg tctacgctgt gaatgcaaat atgaagaaa aagctctgtc 400
 acaatcaagg ttaccattat aatttatctc tccatttttg gccttctact 450
 tctgtacatg gtatatctta ctctggttga gcccatactg aagaggcgcc 500
 tctttggaca tgcacagttg atacagagtg atgatgatat tggggatcac 550
 cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtcgagc 600
 caacgtgctg aacaaggtag aatatgcaca gcagcgcttg aagcttcaag 650
 tccaagagca gcgaaagtct gtctttgacc ggcatgttgt cctcagctaa 700
 ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactgaa 750
 agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800
 ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850
 tttttctctg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900
 aaagtcagcc aataagtcct ttctattttg tgacttttac taataaaaaa 950
 aaatctgcct gtaaatattc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt toaagataat tttoagggtt 1050
 ttgtgtgttg ttgttttttg ttgtttgtt ttggtgggag agggggagga 1100
 tgctgggaa gtggttaaca acttttttca agtcacttta ctaacaaac 1150
 ttttgtaaat agacottacc ttctattttc gagtttcatt tatattttgc 1200
 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250
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 tgtgatgtct gatgcaatgc atcctagaac aaactggcca ttgctagt 1400
 tactctaaag actaaacata gtcttggtgt gtgtggtctt actcatcttc 1450
 tagtaacctt aaggacaaat cctaaggact tggacacttg caataaagaa 1500
 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cggctgtggt gagaggcagc tgtttgagct ccaatatgtg 1600
 cagctttgaa ctagggtctg ggtgtgggt gcctctctcg aaaggtctaa 1650
 ccattattgg ataactggct tttttcttcc tatgtctctt ttggaatgta 1700
 acaataaaaa taatttttga aacatcaa 1728

<210> 418
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 418
 Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu
 1 5 10 15
 Ser Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu
 20 25 30
 Ser Asp Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile
 35 40 45
 Cys Pro Pro Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn
 50 55 60
 Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val Val Glu Pro Met
 65 70 75
 Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu
 80 85 90
 Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val Thr Ile
 95 100 105
 Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Tyr Met Val
 110 115 120
 Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly
 125 130 135

His Ala Gln Leu Ile Gln Ser Asp Asp Asp Ile Gly Asp His Gln
 140 145 150

Pro Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg
 155 160 165

Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys
 170 175 180

Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val
 185 190 195

Val Leu Ser

<210> 419
 <211> 681
 <212> DNA
 <213> Homo sapiens

<400> 419
 gcacctgcga ccacctgtgag cagtcctggc gtaactccaca gtgcagagag 50
 tcgctctggc ttctgggctt gtcctggctc tgctcgctgt gctgcccaag 100
 gccttcctgt cccgcgggaa gcggcaggag ccgccgccga cacctgaag 150
 aaaaattgggc cgatttccac ctatgatgca tcatcaccag gcaccctcag 200
 atggccagac tcctggggct cgtttccaga ggtctcacct tgcgaggca 250
 ttgtcaaaagg ccaaaggatc aggtggaggt gctggaggag gaggtagtgg 300
 aagaggtctg atggggcaga ttattccaat ctacggtttt gggatttttt 350
 tatatatact gtacattcta ttaaggtaa gtagaatcat cctaatacata 400
 ttacatcaat gaaaatctaa tatggcgata aaatcattg tctacattaa 450
 aacttattat agttcataaa attatttcaa atccatcatc tctttaaatc 500
 ctgcctctctc ttcctgaggt acttaggata gccattattt cagtttcaca 550
 taagaatgtt tactcaatgt ttaagtgttt tgccccaaaa ttcacaacta 600
 acaaggcaga actaggactt gaacatggat cttttggttc ttaatccagt 650
 gagtataca attcaatgca ctcccctgcc a 681

<210> 420
 <211> 128
 <212> PRT
 <213> Homo sapiens

<400> 420
 Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu
 1 5 10 15

Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg
 20 25 30

Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly
 35 40 45

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly
50 55 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala
65 70 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly
80 85 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg
110 115 120

Ile Ile Leu Ile Ile Leu His Gln
125

<210> 421
<211> 1630
<212> DNA
<213> Homo sapiens

<400> 421
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gctcttcacg ttggatttga aagttgagag cagcatgttt tgcccactga 100
aactcatcct gctgccagtg ttaactggatt attccttggg cctgaatgac 150
ttgaatgttt ccccgccctga gctaacagtc catgtgggtg attcagctct 200
gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
actggactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300
tattactcca atctcagtg gcttattggg cgcttccaga accgcgtaca 350
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400
tgcaagaggg tgaccaggga acctatatct gtgaaatcgg cctcaaaggg 450
gagagccagg tgttcaagaa ggcggtggtg ctgcatgtgc ttccagagga 500
gccccaaagag ctcatgtgcc atgtgggttg attgattcag atgggatgtg 550
ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatatatt 600
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 gaatcagaga taaaaaccaa cccaaatcaa 1630

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 35 40 45
 Ser Thr Glu Asp Lys Cys Ile Phe Lys Ile Asp Trp Thr Leu Ser
 50 55 60
 Pro Gly Glu His Ala Lys Asp Glu Tyr Val Leu Tyr Tyr Tyr Ser
 65 70 75
 Asn Leu Ser Val Pro Ile Gly Arg Phe Gln Asn Arg Val His Leu
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 Met Gly Asp Ile Leu Cys Asn Asp Gly Ser Leu Leu Leu Gln Asp
 95 100 105
 Val Gln Glu Ala Asp Gln Gly Thr Tyr Ile Cys Glu Ile Arg Leu
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 140 145 150
 Ile Gln Met Gly Cys Val Phe Gln Ser Thr Glu Val Lys His Val

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170	175	180
Ile Val Phe Arg	Tyr Tyr His Lys Leu	Arg Met Ser Val Glu Tyr
185	190	195
Ser Gln Ser Trp	Gly His Phe Gln Asn	Arg Val Asn Leu Val Gly
200	205	210
Asp Ile Phe Arg	Asn Asp Gly Ser Ile	Met Leu Gln Gly Val Arg
215	220	225
Glu Ser Asp Gly	Gly Asn Tyr Thr Cys	Ser Ile His Leu Gly Asn
230	235	240
Leu Val Phe Lys	Lys Thr Ile Val Leu	His Val Ser Pro Glu Glu
245	250	255
Pro Arg Thr Leu	Val Thr Pro Ala Ala	Leu Arg Pro Leu Val Leu
260	265	270
Gly Gly Asn Gln	Leu Val Ile Ile Val	Gly Ile Val Cys Ala Thr
275	280	285
Ile Leu Leu Leu	Pro Val Leu Ile Leu	Ile Val Lys Lys Thr Cys
290	295	300
Gly Asn Lys Ser	Ser Val Asn Ser Thr	Val Leu Val Lys Asn Thr
305	310	315
Lys Lys Thr Asn	Pro Glu Ile Lys Glu	Lys Pro Cys His Phe Glu
320	325	330
Arg Cys Glu Gly	Glu Lys His Ile Tyr	Ser Pro Ile Ile Val Arg
335	340	345
Glu Val Ile Glu	Glu Glu Pro Ser	Glu Lys Ser Glu Ala Thr
350	355	360
Tyr Met Thr Met	His Pro Val Trp Pro	Ser Leu Arg Ser Asp Arg
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Gln Gln Ala Phe		

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 <211> 963
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 ctctgagctc agttgcagta ctcggaagc catgcaggat gaagatggtat 200

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	140	Asn	Arg	Asn	Ile
		Val	Glu	Tyr	Ile
					Lys
Ala	Arg	Thr	His	Leu	Ile
	155	Arg	Trp	Val	Gly
					Leu
					Ser
					Arg
					Gln
					Lys
Ser	Asn	Glu	Val	Trp	Lys
	170	Trp	Glu	Asp	Gly
					Ser
					Val
					Ile
					Ser
					Glu
Asn	Met	Phe	Glu	Phe	Leu
	185	Glu	Asp	Gly	Lys
					Gly
					Asn
					Met
					Asn
					Cys
Ala	Tyr	Phe	His	Asn	Gly
	200	Lys	Met	His	Pro
					Thr
					Phe
					Cys
					Glu
					Asn
Lys	His	Tyr	Leu	Met	Cys
	215	Glu	Arg	Lys	Ala
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					Met
					Thr
					Lys
					Val
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Asp	Gln	Leu	Pro		

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<220>
 <223> Synthetic oligonucleotide probe

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<210> 427
 <211> 49
 <212> DNA
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<220>
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<400> 427
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<210> 428
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 ccaccaatgg cagccccacc t 21

 <210> 429
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 <400> 429
 gactgccctc cctgcca 17

 <210> 430
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 <400> 430
 caaaaagcct ggaagtcttc aaag 24

 <210> 431
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 <400> 431
 cagctggact gcagtgcta 20

 <210> 432
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 <400> 432
 cagtgcac agcaagtgtc ct 22

 <210> 433
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 <400> 433
 ggccacctcc ttgagtcttc agttccct 28

 <210> 434
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<210> 435
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<400> 435
cctttctgta taggtgatac ccaatga 27

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<400> 436
tgcccatccc taccagaggc aaaa 24

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<400> 437
ctgaagacga cgcgattac ta 22

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ggcagaaatg ggaggcaga 19

<210> 439
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<210> 446
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 <400> 448
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 <210> 449
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 <400> 449
 cccatggcga ggaggaat 18

 <210> 450
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 <400> 450
 tgcgtacgtg tgccttcag 19

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<400> 451
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 <210> 453
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 <400> 453
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 tgtcagaatg caacctggct t 21

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<210> 460
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<400> 462
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<400> 464
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ctgaggaacc agccatgtct ct 22

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<211> 225

<212> PRT

<213> Homo Sapien

<400> 497

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Arg	Ser	Gly	Arg	Ala	Trp	Tyr	Leu	Gly	Leu	Asp	Lys	Glu	Gly	Gln
				170					175				180	
Val	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Ala	Ala	Ala	His
				185					190				195	
Phe	Leu	Pro	Lys	Leu	Leu	Glu	Val	Ala	Met	Tyr	Gln	Glu	Pro	Ser
				200					205				210	
Leu	His	Ser	Val	Pro	Glu	Ala	Ser	Pro	Ser	Ser	Pro	Pro	Ala	Pro
				215					220				225	

<210> 498

<211> 744

<212> DNA
<213> Homo Sapien

<400> 498
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gcaagaaccg cgggctctgc aacggcaacc tgggtgatat cttctccaaa 150
gtgcgcattc tcggcctcaa gaagcgcagg ttgcggcgcc aagatcccca 200
gctcaagggt atagtgaacca ggttatattg caggcaaggc tactacttgc 250
aaatgcaccc cgatggagct ctcgatggaa ccaaggatga cagcactaat 300
tctacactct tcaacctcat accagtggga ctacgtgttg ttgccatcca 350
gggagtgaac acagggttgt atatagccat gaatggagaa ggttacctct 400
acccatcaga actttttacc cctgaatgca agtttaaaga atctgttttt 450
gaaaattatt atgtaatac ctcacccatg ttgtacagac aacaggaaac 500
tggtagagcc tggtttttgg gattaaataa ggaaggcgaa gctatgaaag 550
ggaacagagt aaagaaaacc aaaccagcag ctcatcttct acccaagcca 600
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<210> 499
<211> 247
<212> PRT
<213> Homo Sapien

<400> 499
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Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val
35 40 45
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg
50 55 60
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu
65 70 75
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala
80 85 90
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn
95 100 105
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys
110 115 120

Thr	Gly	Leu	Tyr	Ile	Ala	Met	Asn	Gly	Glu	Gly	Tyr	Leu	Tyr	Pro	125	130	135
Ser	Glu	Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe	140	145	150
Glu	Asn	Tyr	Tyr	Val	Ile	Tyr	Ser	Ser	Met	Leu	Tyr	Arg	Gln	Gln	155	160	165
Glu	Ser	Gly	Arg	Ala	Trp	Phe	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Gln	170	175	180
Ala	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Pro	Ala	Ala	His	185	190	195
Phe	Leu	Pro	Lys	Pro	Leu	Glu	Val	Ala	Met	Tyr	Arg	Glu	Pro	Ser	200	205	210
Leu	His	Asp	Val	Gly	Glu	Thr	Val	Pro	Lys	Pro	Gly	Val	Thr	Pro	215	220	225
Ser	Lys	Ser	Thr	Ser	Ala	Ser	Ala	Ile	Met	Asn	Gly	Gly	Lys	Pro	230	235	240
Val	Asn	Lys	Ser	Lys	Thr	Thr									245		

<210> 500
 <211> 2906
 <212> DNA
 <213> Homo Sapien

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 tggaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200
 acacagggag cattcaagaa tgaaataaac cagagttaga cccgcggggg 250
 ttgtgtgttt ctgacataaa taaataatct taaagcagct gttccctctcc 300
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 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400
 gatatttttg gaatgaaaag tttggggcct ttttagtaaa gtaagaact 450
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 tttgtgccta tgttgactaa aattgacgga taattgcagt tggatttttc 650
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 atgcgttttc tctgtttctt aaccacctgg atttccatct ggatgtgtgc 750

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 agtggctgac tgggagacca ccaatgtgac cactctctc acaccacaga 2300
 gcacaaggtc gacagagaaa accttcacca tcccagtgac tgatataaac 2350

Val	Val	Asp	Trp	Glu	Thr	Thr	Asn	Val	Thr	Thr	Ser	Leu	Thr	Pro
				485					490					495
Gln	Ser	Thr	Arg	Ser	Thr	Glu	Lys	Thr	Phe	Thr	Ile	Pro	Val	Thr
				500					505					510
Asp	Ile	Asn	Ser	Gly	Ile	Pro	Gly	Ile	Asp	Glu	Val	Met	Lys	Thr
				515					520					525
Thr	Lys	Ile	Ile	Ile	Gly	Cys	Phe	Val	Ala	Ile	Thr	Leu	Met	Ala
				530					535					540
Ala	Val	Met	Leu	Val	Ile	Phe	Tyr	Lys	Met	Arg	Lys	Gln	His	His
				545					550					555
Arg	Gln	Asn	His	His	Ala	Pro	Thr	Arg	Thr	Val	Glu	Ile	Ile	Asn
				560					565					570
Val	Asp	Asp	Glu	Ile	Thr	Gly	Asp	Thr	Pro	Met	Glu	Ser	His	Leu
				575					580					585
Pro	Met	Pro	Ala	Ile	Glu	His	Glu	His	Leu	Asn	His	Tyr	Asn	Ser
				590					595					600
Tyr	Lys	Ser	Pro	Phe	Asn	His	Thr	Thr	Thr	Val	Asn	Thr	Ile	Asn
				605					610					615
Ser	Ile	His	Ser	Ser	Val	His	Glu	Pro	Leu	Leu	Ile	Arg	Met	Asn
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Ser	Lys	Asp	Asn	Val	Gln	Glu	Thr	Gln	Ile					
				635					640					

<210> 502
 <211> 2458
 <212> DNA
 <213> Homo Sapien

<400> 502
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 agcaactgag cggggaagcg cccgcgtccg gggatcgga tgcctctcct 200
 ccttctctctc ttgctagttt cctactatgt tggaaccttg gggactcaca 250
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 caactggggc ttocagaaaa agacactctg gatattgaat ggctgctcac 350
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 cgggcatggt gccaggcacc tgtaggaaaa tccagcaggt ggaggttgca 2400
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<210> 503
 <211> 373
 <212> PRT
 <213> Homo Sapien

<400> 503
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 Val Thr Leu Pro Cys His His Gln Leu Gly Leu Pro Glu Lys Asp
 35 40 45
 Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Glu
 50 55 60
 Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu
 65 70 75
 Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu
 80 85 90
 Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp
 95 100 105
 Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val
 110 115 120
 Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro
 125 130 135
 Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr
 140 145 150
 Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr
 155 160 165
 Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro
 170 175 180
 Pro Lys Ser Arg Ile Asp Tyr Asn His Pro Gly Arg Val Leu Leu
 185 190 195
 Gln Asn Leu Thr Met Ser Tyr Ser Gly Leu Tyr Gln Cys Thr Ala
 200 205 210
 Gly Asn Glu Ala Gly Lys Glu Ser Cys Val Val Arg Val Thr Val
 215 220 225

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<210> 505
<211> 352
<212> PRT
<213> Homo Sapien

<400> 505
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Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu
35 40 45
Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser
50 55 60
Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser
65 70 75
Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg
80 85 90
Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile
95 100 105
Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys
110 115 120
Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu

	125		130		135
Val Val Leu Val	Lys 140	Pro Ser Gly Ala	Arg 145	Cys Tyr Val Asp	Gly 150
Ser Glu Glu Ile	Gly 155	Ser Asp Phe Lys	Ile 160	Lys Cys Glu Pro	Lys 165
Glu Gly Ser Leu	Pro 170	Leu Gln Tyr Glu	Trp 175	Gln Lys Leu Ser	Asp 180
Ser Gln Lys Met	Pro 185	Thr Ser Trp Leu	Ala 190	Glu Met Thr Ser	Ser 195
Val Ile Ser Val	Lys 200	Asn Ala Ser Ser	Glu 205	Tyr Ser Gly Thr	Tyr 210
Ser Cys Thr Val	Arg 215	Asn Arg Val Gly	Ser 220	Asp Gln Cys Leu	Leu 225
Arg Leu Asn Val	Val 230	Pro Pro Ser Asn	Lys 235	Ala Gly Leu Ile	Ala 240
Gly Ala Ile Ile	Gly 245	Thr Leu Leu Ala	Leu 250	Ala Leu Ile Gly	Leu 255
Ile Ile Phe Cys	Cys 260	Arg Lys Lys Arg	Arg 265	Glu Glu Lys Tyr	Glu 270
Lys Glu Val His	His 275	Asp Ile Arg Glu	Asp 280	Val Pro Pro Pro	Lys 285
Ser Arg Thr Ser	Thr 290	Ala Arg Ser Tyr	Ile 295	Gly Ser Asn His	Ser 300
Ser Leu Gly Ser	Met 305	Ser Pro Ser Asn	Met 310	Glu Gly Tyr Ser	Lys 315
Thr Gln Tyr Asn	Gln 320	Val Pro Ser Glu	Asp 325	Phe Glu Arg Thr	Pro 330
Gln Ser Pro Thr	Leu 335	Pro Pro Ala Lys	Phe 340	Lys Tyr Pro Tyr	Lys 345
Thr Asp Gly Ile	Thr 350	Val Val			

<210> 506
 <211> 1705
 <212> DNA
 <213> Homo Sapien

<400> 506
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 ggacaagaca tgactgtgat gaggagctgc tttcgccaat ttaacaccaa 200
 gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250

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aaaaa 1705

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<210> 507
<211> 206
<212> PRT

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<213> Homo Sapien

<400> 507

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				20					25					30
Val	Val	Leu	Pro	Cys	Leu	Gly	Phe	Thr	Leu	Leu	Trp	Ser	Gln	
				35					40					45
Val	Ser	Gly	Ala	Gln	Gly	Gln	Glu	Phe	His	Phe	Gly	Pro	Cys	Gln
				50					55					60
Val	Lys	Gly	Val	Val	Pro	Gln	Lys	Leu	Trp	Glu	Ala	Phe	Trp	Ala
				65					70					75
Val	Lys	Asp	Thr	Met	Gln	Ala	Gln	Asp	Asn	Ile	Thr	Ser	Ala	Arg
				80					85					90
Leu	Leu	Gln	Gln	Glu	Val	Leu	Gln	Asn	Val	Ser	Asp	Ala	Glu	Ser
				95					100					105
Cys	Tyr	Leu	Val	His	Thr	Leu	Leu	Glu	Phe	Tyr	Leu	Lys	Thr	Val
				110					115					120
Phe	Lys	Asn	His	His	Asn	Arg	Thr	Val	Glu	Val	Arg	Thr	Leu	Lys
				125					130					135
Ser	Phe	Ser	Thr	Leu	Ala	Asn	Asn	Phe	Val	Leu	Ile	Val	Ser	Gln
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Leu	Gln	Pro	Ser	Gln	Glu	Asn	Glu	Met	Phe	Ser	Ile	Arg	Asp	Ser
				155					160					165
Ala	His	Arg	Arg	Phe	Leu	Leu	Phe	Arg	Arg	Ala	Phe	Lys	Gln	Leu
				170					175					180
Asp	Val	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Leu	Gly	Glu	Val	Asp	Ile
				185					190					195
Leu	Leu	Thr	Trp	Met	Gln	Lys	Phe	Tyr	Lys	Leu				
				200					205					

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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cggctctcagg agatgtctga tttccacaga catgcaccat atagaagaga 150
gtttccaaga aatcaaaaga gccatccaag ctaaggacac ottcccaaat 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
tgtgtgctgc gtgaccaaga acctcctggc gttctacgtg gacaggggtg 300

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
170 175

<210> 510
<211> 996
<212> DNA
<213> Homo Sapien

<400> 510
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tggcttcggt agaacgcgc tacaattaat acataacctt atgtatcata 100
cacatacgat ttaggtgaca ctatagaata acatccactt tgcctttctc 150
tccacaggtg tccactccca ggtccaactg cacotcggtt ctatcgataa 200
tctcagcacc agccactcag agcagggcac gatgttgggg gccccgctca 250
ggctctgggt ctgtgccttg tgcagcgtct gcagcatgag cgtcctcaga 300
gcctatccca atgcctcccc actgctcggc tccagctggg gtggcctgat 350
ccacctgtac acagccacag ccaggaacag ctaccacctg cagatccaca 400
agaatggcca tgtggatggc gcaccccatc agaccatcta cagtgccctg 450
atgatcagat cagaggatgc tggctttgtg gtgattacag gtgtgatgag 500
cagaagatac ctctgcatgg atttcagagg caacattttt ggatcacact 550
atttcgaccc ggagaactgc aggttccaac accagacgct ggaaaacggg 600
tacgacgtct accactctcc tcagtatcac ttcttggtca gtctgggccg 650
ggcgaagaga gccttcctgc caggcatgaa cccaccccg tactccagt 700
tcctgtcccg gaggaacgag atccccctaa ttcaattcaa caccgccata 750
ccacggcggc acacccggag cgccaggagc gactcggagc gggacccct 800
gaacgtgctg aagccccggg cccggatgac cccggcccg gcctcctgtt 850
cacaggagct cccgagcgcc gaggacaaca gccgatggc cagtgaacca 900
ttagggtg tgagggcgcg tcgagtgaac acgcacgctg ggggaacggg 950
cccggaaggc tgccgcccct tcgccaaagt catctagggt cgctgg 996

<210> 511
<211> 251
<212> PRT
<213> Homo Sapien

<400> 511
Met Leu Gly Ala Arg Leu Arg Leu Trp Val Cys Ala Leu Cys Ser
1 5 10 15
Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro
20 25 30

Leu	Leu	Gly	Ser	Ser	Trp	Gly	Gly	Leu	Ile	His	Leu	Tyr	Thr	Ala	
				35					40					45	
Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His	
				50					55					60	
Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	
				65					70					75	
Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	
				80					85					90	
Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	
				95					100					105	
His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	
				110					115					120	
Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	
				125					130					135	
Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn	
				140					145					150	
Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	
				155					160					165	
Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser	
				170					175					180	
Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val	Leu	Lys	Pro	
				185					190					195	
Arg	Ala	Arg	Met	Thr	Pro	Ala	Pro	Ala	Ser	Cys	Ser	Gln	Glu	Leu	
				200					205					210	
Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	Pro	Leu	Gly	
				215					220					225	
Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly	
				230					235					240	
Pro	Glu	Gly	Cys	Arg	Pro	Phe	Ala	Lys	Phe	Ile					
				245					250						

<210> 512

<211> 2015

<212> DNA

<213> Homo Sapien

<400> 512

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ctgctgggag gttggggtct ctgggagctc tgcaggcccc agcaccgcga 150

gagcagacac tgcatgaca acggacgaca cagaagtgcc cgctatgact 200

ctagcaccgg gccacgccgc tctggaaact caaacgctga gcgctgagac 250

ctcttctagc gcctcaaccc cagccggccc cattccagaa gcagagacca 300

gggtgccttg gactcacctt ggcacatgtt ctgtgtttca gtaaagagag 1950
 acctgatcac ccactctgtgt gcttccatcc tgcattaaaa ttcactcagt 2000
 gtggcccaaa aaaaa 2015

<210> 513
 <211> 482
 <212> PRT
 <213> Homo Sapien

<400> 513
 Met Gly Cys Leu Trp Gly Leu Ala Leu Pro Leu Phe Phe Phe Cys
 1 5 10 15
 Trp Glu Val Gly Val Ser Gly Ser Ser Ala Gly Pro Ser Thr Arg
 20 25 30
 Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala
 35 40 45
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
 50 55 60
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
 65 70 75
 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
 80 85 90
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
 95 100 105
 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
 110 115 120
 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
 125 130 135
 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
 140 145 150
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
 155 160 165
 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
 170 175 180
 Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
 185 190 195
 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
 200 205 210
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
 215 220 225
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
 230 235 240
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
 245 250 255

Thr Glu Ile Glu Thr Thr Thr Ser Ser Ile Pro Gly Ala Ser Asp
 260 265 270
 Ile Asp Leu Ile Pro Thr Glu Gly Val Lys Ala Ser Ser Thr Ser
 275 280 285
 Asp Pro Pro Ala Leu Pro Asp Ser Thr Glu Ala Lys Pro His Ile
 290 295 300
 Thr Glu Val Thr Ala Ser Ala Glu Thr Leu Ser Thr Ala Gly Thr
 305 310 315
 Thr Glu Ser Ala Ala Pro His Ala Thr Val Gly Thr Pro Leu Pro
 320 325 330
 Thr Asn Ser Ala Thr Glu Arg Glu Val Thr Ala Pro Gly Ala Thr
 335 340 345
 Thr Leu Ser Gly Ala Leu Val Thr Val Ser Arg Asn Pro Leu Glu
 350 355 360
 Glu Thr Ser Ala Leu Ser Val Glu Thr Pro Ser Tyr Val Lys Val
 365 370 375
 Ser Gly Ala Ala Pro Val Ser Ile Glu Ala Gly Ser Ala Val Gly
 380 385 390
 Lys Thr Thr Ser Phe Ala Gly Ser Ser Ala Ser Ser Tyr Ser Pro
 395 400 405
 Ser Glu Ala Ala Leu Lys Asn Phe Thr Pro Ser Glu Thr Pro Thr
 410 415 420
 Met Asp Ile Ala Thr Lys Gly Pro Phe Pro Thr Ser Arg Asp Pro
 425 430 435
 Leu Pro Ser Val Pro Pro Thr Thr Thr Asn Ser Ser Arg Gly Thr
 440 445 450
 Asn Ser Thr Leu Ala Lys Ile Thr Thr Ser Ala Lys Thr Thr Met
 455 460 465
 Lys Pro Gln Gln Pro Arg Pro Arg Leu Pro Gly Arg Gly Arg Pro
 470 475 480
 Gln Thr

<210> 514
 <211> 2284
 <212> DNA
 <213> Homo Sapien

<400> 514
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 tccttcccgc gggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100
 ggcgcggggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150
 cttcttaaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200
 gacaaaaact aaactgaaat ttaaaatgtt cttcggggga gaagggagct 250

tgacttacac ttggttaata atttgcctcc tgacactaag gctgtctgct 300
 agtcagaatt gcctcaaaaa gagctagaa gatgttgta ttgacatcca 350
 gtcactctctt tctaaggaa tcagaggcaa tgagcccgta tatacttcaa 400
 ctcaagaaga ctgcattaat tcttgcctgt caacaaaaaa catatcaggg 450
 gacaaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500
 acccaactgc tacctatttt tctgtcccaa cgaggagacc tgtccattga 550
 aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600
 ttgaccagaa atttgccaag ccaagagtta ccccgaggag attctctctt 650
 acatggccaa ttttcacaag cagtcactcc cctagcccat catcacacag 700
 attattcaaa gccaccgat atctcatgga gagacacact ttctcagaag 750
 ttggatcct cagatcacct ggagaaacta tttaagatgg atgaagcaag 800
 tgcccagctc ctgtcttata aggaaaaagg ccattctcag agttcacaa 850
 tttctctga tcaagaaata gctcatctgc tgcctgaaaa tgtgagtgcg 900
 ctcccagcta cgggtggcagt tgcttctcca cataccacct cggctactcc 950
 aaagcccgcc acccttttac ccaccaatgc ttcagtgaac ccttctggga 1000
 cttccagacc acagctggcc accacagctc cacctgtaac cactgtcact 1050
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 tacactccaa gcaatggcta caacagcagt tctgactacc accttccagg 1150
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 tccaacttaa ctttgaacac aggggaatgtg tataacccta ctgcactttc 1250
 tatgtcaaat gtggagtctt ccaactatga taaaactgct tcttgggaag 1300
 gtagggaagg cagtcagggc agttctctcc agggcagtg tccagaaaa 1350
 cagtacggcc ttccatttga aaaatggctt cttatcgggt ccttgcctct 1400
 tgggtgctctg ttctgggtga taggcctcgt cctcctgggt agaactcctt 1450
 cggaatcact ccgcaggaaa cgttactcaa gactggatta ttgatcaat 1500
 gggatctatg tggacatcta aggatggaac tcggtgtctc ttaattcatt 1550
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 agcaggaggt tgtattttga agacaggaaa atgccccctt ctgcttctct 1650
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 ttctcctgcc tcagcctcct aagtatctgg gattacaggc atgtgccacc 1800
 acacctgggt gatttttcta ttttttagtag agacgggggt tcacatggt 1850

ggtcaggctg gctcaaaact cctgacctag tgatccaccc tcctcggcct 1900
 cccaaagtgc tgggattaca ggcattgagc accacagctg gcccccttct 1950
 gttttatggt tgggttttga gaaggaatga agtgggaacc aaattaggta 2000
 attttgggta atctgtctct aaaatattag ctaaaaacaa agctctatgt 2050
 aaagtaataa agtataattg ccatataaat ttcaaaatcc aactggcttt 2100
 tatgcaaaga aacaggttag gacatctagg ttccaattca ttcacattct 2150
 tggttccaga taaaatcaac tgtttatatc aatttctaag ggatttgctt 2200
 ttctttttat atggattcct ttaaaactta ttccagatgt agttccttcc 2250
 aattaaatat ttgaataaat cttttgttac tcaa 2284

<210> 515
 <211> 431
 <212> PRT
 <213> Homo Sapien

<400> 515
 Met Phe Phe Gly Gly Glu Gly Ser Leu Thr Tyr Thr Leu Val Ile
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 Ile Cys Phe Leu Thr Leu Arg Leu Ser Ala Ser Gln Asn Cys Leu
 20 25 30
 Lys Lys Ser Leu Glu Asp Val Val Ile Asp Ile Gln Ser Ser Leu
 35 40 45
 Ser Lys Gly Ile Arg Gly Asn Glu Pro Val Tyr Thr Ser Thr Gln
 50 55 60
 Glu Asp Cys Ile Asn Ser Cys Cys Ser Thr Lys Asn Ile Ser Gly
 65 70 75
 Asp Lys Ala Cys Asn Leu Met Ile Phe Asp Thr Arg Lys Thr Ala
 80 85 90
 Arg Gln Pro Asn Cys Tyr Leu Phe Phe Cys Pro Asn Glu Glu Ala
 95 100 105
 Cys Pro Leu Lys Pro Ala Lys Gly Leu Met Ser Tyr Arg Ile Ile
 110 115 120
 Thr Asp Phe Pro Ser Leu Thr Arg Asn Leu Pro Ser Gln Glu Leu
 125 130 135
 Pro Gln Glu Asp Ser Leu Leu His Gly Gln Phe Ser Gln Ala Val
 140 145 150
 Thr Pro Leu Ala His His His Thr Asp Tyr Ser Lys Pro Thr Asp
 155 160 165
 Ile Ser Trp Arg Asp Thr Leu Ser Gln Lys Phe Gly Ser Ser Asp
 170 175 180
 His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala Ser Ala Gln Leu
 185 190 195

Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser	
				200					205					210	
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala	
				215					220					225	
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala	
				230					235					240	
Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	
				245					250					255	
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	
				260					265					270	
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	
				275					280					285	
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr	
				290					295					300	
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly	
				305					310					315	
Ser	Leu	Glu	Thr	Ile	Pro	Phe	Thr	Glu	Ile	Ser	Asn	Leu	Thr	Leu	
				320					325					330	
Asn	Thr	Gly	Asn	Val	Tyr	Asn	Pro	Thr	Ala	Leu	Ser	Met	Ser	Asn	
				335					340					345	
Val	Glu	Ser	Ser	Thr	Met	Asn	Lys	Thr	Ala	Ser	Trp	Glu	Gly	Arg	
				350					355					360	
Glu	Ala	Ser	Pro	Gly	Ser	Ser	Ser	Gln	Gly	Ser	Val	Pro	Glu	Asn	
				365					370					375	
Gln	Tyr	Gly	Leu	Pro	Phe	Glu	Lys	Trp	Leu	Leu	Ile	Gly	Ser	Leu	
				380					385					390	
Leu	Phe	Gly	Val	Leu	Phe	Leu	Val	Ile	Gly	Leu	Val	Leu	Leu	Gly	
				395					400					405	
Arg	Ile	Leu	Ser	Glu	Ser	Leu	Arg	Arg	Lys	Arg	Tyr	Ser	Arg	Leu	
				410					415					420	
Asp	Tyr	Leu	Ile	Asn	Gly	Ile	Tyr	Val	Asp	Ile					
				425					430						

<210> 516
 <211> 2749
 <212> DNA
 <213> Homo Sapien

<220>
 <221> unsure
 <222> 1869, 1887
 <223> unknown base

<400> 516
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 ttgcctgctg ctcccaggtt atgaagccct ggagggccca gaggaataca 100

gcgggttcga aggggacact gtgtccctgc agtgcaccta cagggagag 150
 ctgagggacc accggaagta ctggtgcagg aagggtggga tcctcttctc 200
 tcgtgtctct ggcaccatct atgcagaaga agaaggccag gagacaatga 250
 agggcagggt gtccatccgt gacagccgcc aggagctctc gctcattgtg 300
 accctgtgga acctcaccct gcaagacgct ggggagtact ggtgtgggg 350
 cgaaaaacgg ggcgccgatg agtctttact gatctctctg ttcgtctttc 400
 caggaccctg ctgtctctcc tccccctctc ccaccttcca gctctgggt 450
 acaacacgcc tgcagcccaa ggcaaaagct cagcaaaccc agccccagg 500
 attgacttct cctgggtctc acccggcagc caccacagcc aagcaggga 550
 agacaggggc tgaggccctc ccattgccag ggacttccca gtacggggac 600
 gaaaggactt ctacgtacac aggaacctct cctcaccag cgacctctcc 650
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 aggacaccag tccagctctc agcagtggca gctctaagcc caggggtgctc 750
 atcccgatgg tccgcatact ggccccagtc ctggtgtctg tgagccttct 800
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 aggaagtcga acagccacg gagacacaga ggaacagaga gttctggctc 900
 tcacgcttga ctgcggagga aaaggaagcc ccttcccagg cccctgaggg 950
 ggaagtgatc tcgatgcctc cctccacac atctgaggag gagctgggct 1000
 tctcgaagtt tgtctcagc tagggcagga ggccctcctg gccaggccag 1050
 cagtgaagca gtatggctgg ctggatcagc accgattccc gaaagcttcc 1100
 caacctagcc tcagagtcca gctgcccgga ctccagggct ctccccacc 1150
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 cagcagggcc agacaaggct cagtggatct ggtctgagtt tcaatctgcc 1350
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 ccagaccoca ccttgtcttc cctccctggc gtctcagac ttagtccac 1450
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 ggcttggtgc aggactctga attctaaca tgcccagtg ctgtcgact 1650
 tgagtttgag ggccagtggt cctgatgaac gctcaccccc cttcagctta 1700

gagtcgcat ttgggctgtg acgtctccac ctgcccacat agatctgctc 1750
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 ctgcaaaactc cgctcctgg gttcaagtga ttcttctgcc tcagcctccc 2250
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 ctttttagtag agatgggggtt tcaccatgtt ggccaggctg gtcttgaact 2350
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 agagtgttc agtatgcaa acttggaag atggaggaga aaaagaaaag 2500
 gaagaaaaaa atgtcaccca tagtctcacc agagactatc attattcgt 2550
 tttgtgtac ttcttccac tttttcttc ttacataat ttgccggtg 2600
 tctttttaca gagcaattat ctgttatata caactttgta tctgccttt 2650
 tccaccttat cgttccatca ctttattcca gcactctct gtgttttaca 2700
 gaccttttta taaataaaat gttcatcagc tgcataaaaa aaaaaaaaa 2749

<210> 517
 <211> 332
 <212> PRT
 <213> Homo Sapien

<400> 517
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 1 5 10 15
 Tyr Glu Ala Leu Glu Gly Pro Glu Glu Ile Ser Gly Phe Glu Gly
 20 25 30
 Asp Thr Val Ser Leu Gln Cys Thr Tyr Arg Glu Glu Leu Arg Asp
 35 40 45
 His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg
 50 55 60
 Cys Ser Gly Thr Ile Tyr Ala Glu Glu Glu Gly Gln Glu Thr Met
 65 70 75

Lys Gly Arg Val	Ser Ile Arg Asp Ser	Arg Gln Glu Leu Ser	Leu
	80	85	90
Ile Val Thr Leu	Trp Asn Leu Thr Leu	Gln Asp Ala Gly Glu Tyr	
	95	100	105
Trp Cys Gly Val	Glu Lys Arg Gly Pro	Asp Glu Ser Leu Leu	Ile
	110	115	120
Ser Leu Phe Val	Phe Pro Gly Pro Cys	Cys Pro Pro Ser Pro	Ser
	125	130	135
Pro Thr Phe Gln	Pro Leu Ala Thr Thr	Arg Leu Gln Pro Lys	Ala
	140	145	150
Lys Ala Gln Gln	Thr Gln Pro Pro Gly	Leu Thr Ser Pro Gly	Leu
	155	160	165
Tyr Pro Ala Ala	Thr Thr Ala Lys Gln	Gly Lys Thr Gly Ala	Glu
	170	175	180
Ala Pro Pro Leu	Pro Gly Thr Ser Gln	Tyr Gly His Glu Arg	Thr
	185	190	195
Ser Gln Tyr Thr	Gly Thr Ser Pro His	Pro Ala Thr Ser Pro	Pro
	200	205	210
Ala Gly Ser Ser	Arg Pro Pro Met Gln	Leu Asp Ser Thr Ser	Ala
	215	220	225
Glu Asp Thr Ser	Pro Ala Leu Ser Ser	Gly Ser Ser Lys Pro	Arg
	230	235	240
Val Ser Ile Pro	Met Val Arg Ile Leu	Ala Pro Val Leu Val	Leu
	245	250	255
Leu Ser Leu Leu	Ser Ala Ala Gly Leu	Ile Ala Phe Cys Ser	His
	260	265	270
Leu Leu Leu Trp	Arg Lys Glu Ala Gln	Gln Ala Thr Glu Thr	Gln
	275	280	285
Arg Asn Glu Lys	Phe Trp Leu Ser Arg	Leu Thr Ala Glu Glu	Lys
	290	295	300
Glu Ala Pro Ser	Gln Ala Pro Glu Gly	Asp Val Ile Ser Met	Pro
	305	310	315
Pro Leu His Thr	Ser Glu Glu Glu Leu	Gly Phe Ser Lys Phe	Val
	320	325	330

Ser Ala

<210> 518

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518

ccctgcagtg cacctacagg gaag 24

<210> 519

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519

ctgtcttccc ctgcttggt gtgg 24

<210> 520

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520

gggtcaggaa ggggtgggac ctcttctctc gctgctctgg ccacatc 47

<210> 521

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521

ccagtgcaca gcaggcaagc aagc 24

<210> 522

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 522

actaggctgt atgcctgggt gggc 24

<210> 523

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 523

gtatgtacaa agcatcggca tggttgcagg agcagtgaca ggc 43

<210> 524

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 530

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